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ABSTRACT

In 1973-74 Tennessee Technological University developed and implemented a Teacher Evaluation Model for systematic data gathering and evaluating its programs in teacher education. This report presents the findings of the third year of the application of the model. The purposes of this study are: (1) to provide information for faculty and administrators in the university's teacher education program in making decisions pertinent to curriculum evaluation and development; (2) to aid in the process of making long-range plans for improving the total program of the university with particular emphasis on the teacher education program, and (3) to continue the development and refinement of the Teacher Evaluation Model. Chapter 1 presents the procedures followed in the study. Chapter 2 contains a presentation and analysis of data for those individuals who received their B.S. in 1975 and were in their first year of the study. Information pertinent to those who received the M.A. in 1975 is presented in Chapter 3, and comparisons of data obtained in the current year of the study with data obtained in past years is presented in Chapter 4. Chapter 5 summarizes the total evaluative study conducted during the 1975-76 school year, draws conclusions based on the findings of the study, and makes recommendations relative to the findings. A short summary of plans for the continuation of the study is discussed in Chapter 6. Fifty-three tables of data are included, and a list of related reports is given in the appendix. (SK)

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STUDY OF THE TEACHER PREPARATION PROGRAMS OF

TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 76-1

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL - YEAR III

JUNE, 1976

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Tennessee Technological University
College of Education
Cookeville, Tennessee

STUDY OF THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 75-1

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL-YEAR III

Report Prepared By:

Jerry B. Ayers
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June, 1976

Tennessee Technological University

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PREFACE

In recent years, increasing attention has been given to the evaluation of the graduates of the teacher education programs of Tennessee Technological University. Followup studies of all graduates have been conducted on a regular basis and special studies have been performed to provide input for the overall operation of the programs of the University. In order to improve the evaluation component of the teacher education program of the University, an intensive study was initiated in the Fall of 1973 of the graduates. This study was continued through 1975-76 utilizing a modified model that was previously developed for evaluating graduates of teacher education programs. Summaries of the results of the first two years of the application of the model are contained in Reports 74-4 and 75-4 available from the Office of the Associate Dean of the College of Education.

The purpose of this present report is to present the findings of the third year of the application of the Tennessee Technological University Teacher Evaluation Model. In turn, this report will be utilized in providing inputs into the total system of teacher education at the University. This report is by no means complete; however, it will serve to inform the reader of the basic procedures used and the preliminary findings of the third year of the study and also of comparisons that have been made across the three years of the project. It is anticipated that in the near future additional data analyses will be made that may aid in providing additional understandings of the total evaluative project.

In order to conserve paper only essential information has been included in this report. If the reader desires additional information or analyses of data in other ways, it is suggested that he contact the author of this report. Also it should be pointed out that the Office of the Associate Dean has been involved in a number of separate studies during the past six years that are directly related to teacher evaluation. A complete listing of these reports is contained in the Appendix of this document, and copies or abstracts of the reports are available from the Associate Dean's Office.

The author of this report is indebted to the efforts of several individuals that have been extensively involved in working with the project. These individuals include: Miss Janis M. Search, Graduate Assistant; Mrs. Gaile D. Cannella, Graduate Assistant; Mrs. Rena U. Nunally, Graduate Assistant; Mr. Alvin G. Massey, Graduate Assistant; Mrs. Myra Richardson, Clerk-Typist; Mrs. Barbara H. Simms, Secretary; Mrs. Linda Carroll, Secretary; Dr. John Thomas, Associate Professor of Educational Psychology and Counselor Education; and Mr. James T. Browning, User Liaison/Statistician, D. W. Mattson Computer Center. In addition, thanks are extended to all principals, teachers, superintendents, and other school personnel that proved technical assistance, data, and allowed the project staff to work with them in various ways.

Jerry B. Ayers
Associate Dean, College of Education
June, 1976

CHAPTER I

INTRODUCTION AND PROCEDURES

Beginning in 1970, with the creation of the Office of the Administrative Assistant for Special Services and continued by the Office of the Assistant to the Dean, a series of separate studies was begun related to the evaluation of students enrolled in and graduates of the teacher education programs of Tennessee Technological University. The research has been systematic and designed to meet Standards 5.1 and G-5.1 established by the National Council for Accreditation of Teacher Education, as well as to answer such questions as course effectiveness, the proper sequence of courses, factors related to achievement, success of the graduates after entering the teaching profession, better methods of instruction, and the degree of achievement of the stated competencies of the teacher education program. It should be noted that there are companion studies designed to evaluate the programs to prepare school service personnel at the M.A. and Ed.S. levels.

The works of Sandefur and Adams (1, 2, 3) have led to the development of a model (Tennessee Technological University Teacher Evaluation Model) for the evaluation of graduates of the programs of the University that are designed to prepare teachers at the bachelor's, master's and specialist's levels. During 1973-74 the Evaluation Model was implemented and continued during 1974-75 with funds available from the budget of the College of Education. The results of the application of the model were summarized in Reports 74-4 and 75-4 prepared by the Office of the Assistant to the Dean (4, 5).

The third year of the application of the Evaluation Model was initiated in the fall of 1975. The remainder of this chapter describes the purposes of the third year of the operation of the Model and limitations of and the procedures used in conducting the major phases of the study. Chapters II through IV contain presentations and interpretations of the data in the study. Chapter V consists of a summary and the conclusions and recommendations based on the findings of the study and Chapter VI outlines tentative plans for continuation of the study during the fourth year of operation. The Appendix contains a summary listing of all evaluative studies that have been conducted by the Administrative Assistant for Special Services or the Office of the Assistant to the Dean for the past six years. Also included are references to other studies of the teacher education programs conducted by other units of the University.

Purposes

The purposes of the study that are reported in this document include the following:

1. To provide information for faculty and administrators concerned with teacher education programs at Tennessee Technological University in making decisions pertinent to curriculum evaluation and development.

2. To aid in the process of making long-range plans for improving the total program of the University with particular emphasis on the teacher education programs.

3. To continue the development and refinement of the Tennessee Technological University Teacher Evaluation Model.

Specific objectives to be accomplished as a part of this study were as follows:

1. To continue studying in a longitudinal manner those subjects who were a part of the 1973-74 and 1974-75 application of the Model.

2. To provide a descriptive profile of a sample of 1975 graduates of the teacher education programs of Tennessee Technological University.

3. To determine relationships among selected variables that were measured as a part of the total study.

4. To provide comparisons between the graduates of the teacher education programs of Tennessee Technological University with those who might be considered as effective teachers as defined in the original literature of teacher education.

5. To provide effective dissemination of relevant research data to the faculty and administration of the University associated with the teacher education programs.

6. To provide information and suggestions for curriculum evaluation and development based on empirical research data.

7. To continue to evaluate the procedures employed in the study and to make long-range plans for modifications and refinement of the basic Evaluation Model.

Limitations

The general limitations for this study are as follows and are primarily concerned with sampling techniques:

1. Subjects for the study were individuals who were 1975 graduates of a bachelor's or master's level program at Tennessee Technological University designed to prepare them as teachers or they were individuals who participated in the two years of the study.

2. Subjects were teaching in the State of Tennessee within a 100-mile radius of Cookeville, Tennessee. (Approximately 70 percent of all graduates of the teacher education programs of the University, that are teaching, reside within the specified geographical limits of the study.)

3. The subjects volunteered to participate in the study.

4. The principals and superintendents under whom the subjects worked agreed that the graduates could participate in the study.

5. The sample size of 1973 and 1974 graduates was reduced by about one-third due to attrition from the teaching profession or moving out of the geographical limits of the study. Therefore, the findings of the study may be limited in their applicability to the population of graduates from the University and also other institutions.

Limitations 1 through 4 above were imposed in order to make the study more feasible regarding the followup of the subjects. Voluntary participation was deemed necessary due to the extensive collection of data and due to the cooperation required from the subjects for classroom observations and completion of forms. Also, the limitation of a 100-mile radius of Cookeville, Tennessee, was necessary because of the limited travel funds available and the time available for the research assistants to visit in the classrooms of the participating subjects.

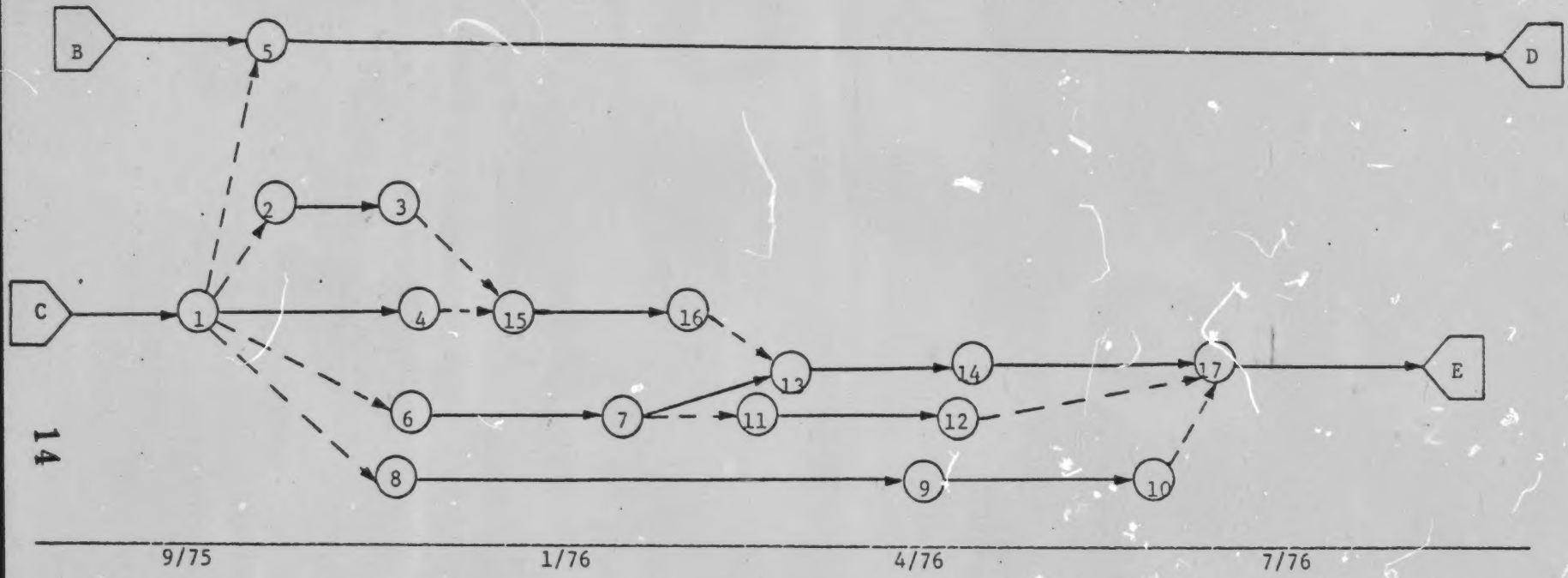
Procedures

The purpose of this section is to provide the reader with a brief description of the procedures employed in collecting the data utilized in this study. This section is concerned specifically with selection of subjects, implementation of the study, training of staff, and methods of data collection and analyses. Figure 1 shows a PERT chart of the major activities of the project from August 1, 1975 through May 31, 1976. In order to conserve space, the reader is referred to Chapter 2 of Reports 74-4 and 75-4 (4, 5) for a more complete description of such topics as instrumentation and training of observers.

Selection of Subjects

Three groups of subjects participated in the 1975-76 phase of the project. The first group of individuals (1971, 1972, and 1973 graduates) were participating in the project for the third year, while the second group was participating for the second year. The third group consisted of those individuals that received either the B.S. or M.A. in 1975. Table 1 shows a summary of the number of individuals, by year of graduation, participating in each phase of the study.

Table 2 shows a summary of the reasons and numbers of individuals failing to participate in the 1975-76 phase of the study. This table shows the data by original date of graduation from the University. Between 1974-75 and 1975-76, 11 individuals (12.9 percent) left the teaching profession, 5 individuals (5.9 percent) were teaching out of the geographical limits of the study, and 15 individuals (17.6 percent) asked to withdraw from the study or could not be located. The overall attrition between the two years was 31 individuals or 36.5 percent. This figure is comparable with the attrition between the first and second year of the study (5).



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Summary of Activities

1-4	Finalize Plans for Visiting Subjects in 1974-75 Study
2-3	Training of Observers
5--	Continuing Contact With Other Projects and Survey of the Literature
6-7	Survey All 1975 Graduates
8-9	Conduct Other Related Studies
9-10	Prepare Reports of Related Studies
11-12	Survey Principals of All 1975 Graduates
7-13	Select Sample of 1975 Graduates for Intensive Study as Part of Followup
13-14	Make School Visits on 1975 Graduates
15-16	Make School Visits on 1974-75 Subjects
14-17	Complete Reports and Submit
17--	Begin Making Plans for 1976-77 Phase of Study

Figure 1. PERT Chart of Major Activities for 1975-76.

Table 1

Number of Subjects by Year of Graduation Participating in Each Phase of Study

Phase of Study	1970	1971	1972	1973	1974	1975	Total
1973-74	0/6*	0/12	0/19	4/18	---	---	4/49
1974-75	**	0/8	0/14	4/10	16/33	---	20/65
1975-76	**	0/6	0/12	0/8	8/18	12/32	20/76

* No. M.A./No. B.S.
** Dropped from Study by original design.

Table 2

Reasons and Number of Individuals Dropping Out of Study From 1974-75 to 1975-76 (By Year of Graduation From University)

Reason	1971	1972	1973	1974	Total
Left Teaching Profession	1	0	2	8	11
Teaching Out of Geographical Region of Study	0	1	2	2	5
Teaching In Region But Declined to Participate in Study	0	0	2	6	8
No Reason Given	0	0	0	4	4
Unable to Locate (No Response to Questionnaires, Phone Calls, or No Forwarding Address at Post Office)	1	1	0	1	3
Total	2	2	6	21	31

As a part of the routine followup activities of the Office of the Assistant to the Dean, all 1975 graduates of the teacher education programs were contacted in the late fall of 1975 (364 B.S. graduates and 191 M.A. graduates). As a result of this initial survey (6), all graduates who were teaching within the defined geographical limits of the project were contacted by mail and/or

telephone and asked to participate in this study. A total of 32 B.S. and 12 M.A. level graduates volunteered to participate.

Figure 2 shows a map of a selected portion of Tennessee. The numerals within each county indicate the number of individuals who have previously participated in the study. The numerals in circles indicate those individuals participating in the study for the third year and the non-circled numerals indicate the number participating for the second year. Figure 3 shows similar information for the 1975 graduates. Table 3 shows a distribution of the number of individuals by year of graduation, their primary teaching assignment and whether they had completed a bachelor's or a master's degree from the University.

Instrumentation

Instrumentation for the 1975-76 study was identical with that used during 1974-75. The reader is referred to Reports 74-4 and 75-4 for further details (4, 5).

Training of Observers

The procedures for the training of observers are outlined in Report 74-4 (4). Based on three years of work, it is felt that the methods are appropriate and effective.

Collection of Data

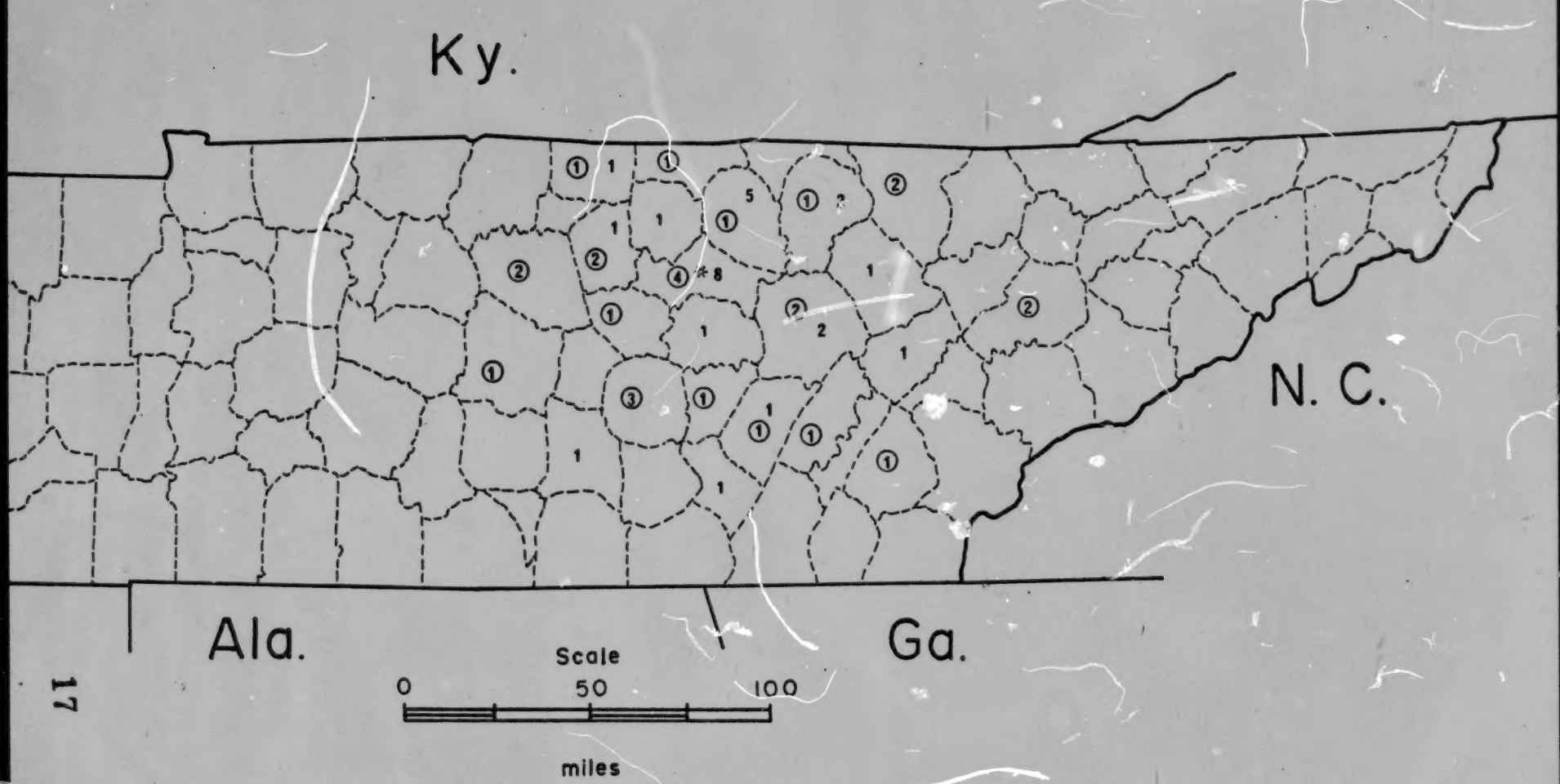
The methods for the collection of data are detailed in Reports 74-4 and 75-4 (4, 5). It should be pointed out that only one-half day visit was made to each subject. Based on experiences of the 1973-74 and 1974-75 studies, it was felt that this was sufficient time to gather the needed data. In general, those individuals who participated in the first two years of the study were visited in the fall of 1975, while the 1975 graduates were visited in the winter and early spring of 1976.

Analysis of Data

The basic methods and procedures were detailed in Reports 74-4 and 75-4 (4, 5). Additional comparisons were made of the data collected during the first two years of the study with data collected as a part of the third year.

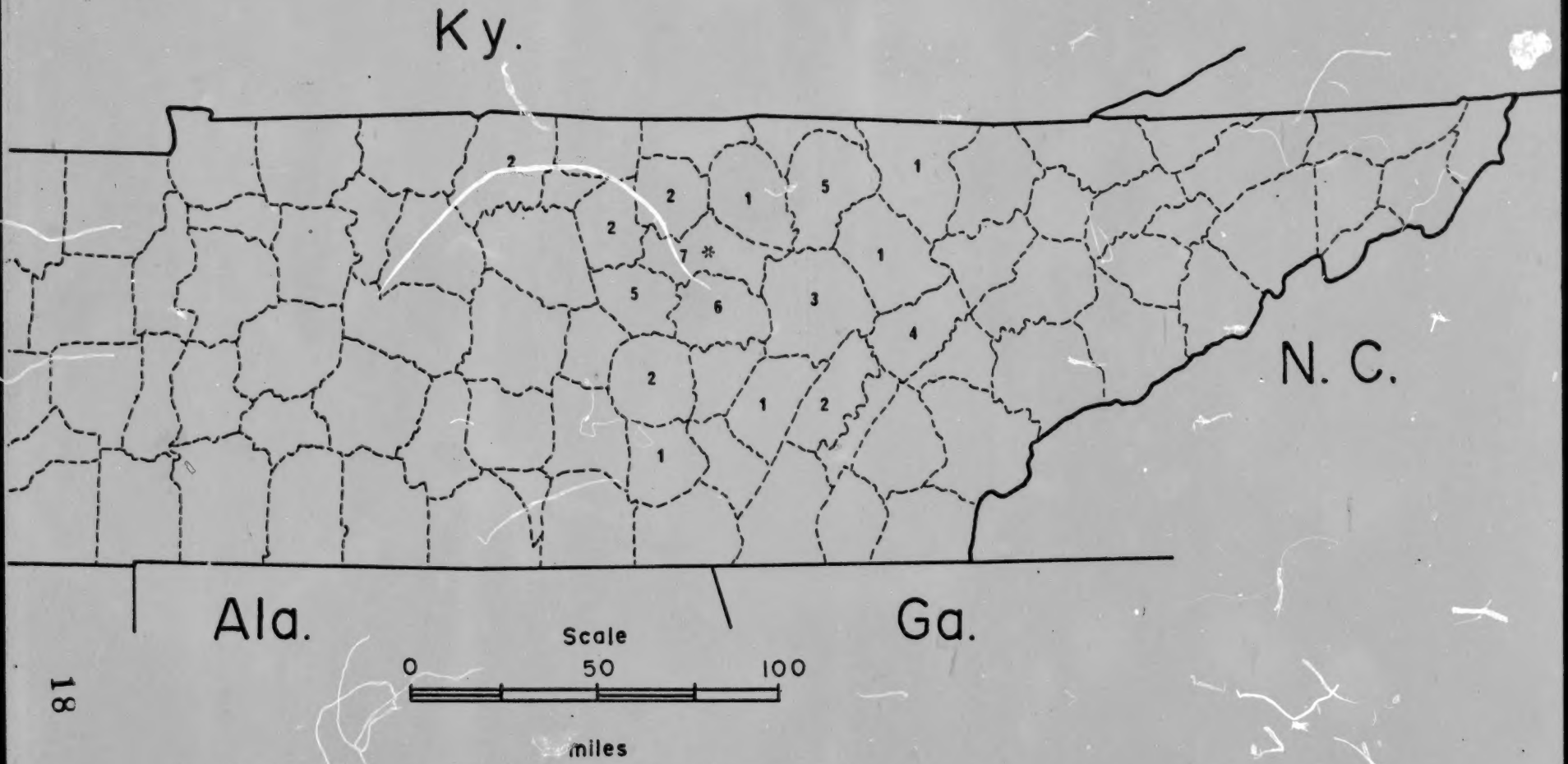
Summary

In summary this chapter has presented a brief overview of the total operation of the 1975-76 phase of the longitudinal study of the graduates of the teacher education programs of Tennessee Technological University. Included in this chapter has been a summary statement of the major purposes of the project, limitations of the study and the major procedures employed in conducting the study. It is felt that the information available from this report and the companion 1974 and 1975 reports will be useful to those individuals attempting to replicate this study. It should be pointed out that additional information and specifics related to the methodology employed in this study are available from the Office of the Assistant to the Dean, College of Education.



* Cookeville, Tennessee--Location of Tennessee Technological University

Figure 2. Distribution of Subjects Who Have Participated in Study More Than One Year.
(N) - Participating in Study for Third Year
N - Participating in Study for Second Year



* Cookeville, Tennessee--Location of Tennessee Technological University

Figure 3. Distribution of 1975 Graduates Who Participated in Study.

Table 3

SAMPLE FOR INTENSIVE FOLLOWUP 1975-76*

YEAR	K	1-3		4-7		8-12	SP.ED.	TOTAL	ENG.-	SCI.	HIST.	BUS.ED.	MATH	H.EC.	P.E.	OTHER
1971	0/1	0/0		0/2		0/3	0/0	0/6	2	0	0	0	1	0	0	0
1972	0/4	0/0	0/1	0/4		0/1	0/2	0/12	0	0	0	1	0	0	0	1
1973	0/1	0/3	0/1	0/0		0/3	0/0	0/8	0	0	0	0	1	0	2	0
1974	3/5	0/4	0/1	1/3	2/1	1/1	1/3	8/18	0	1	1	0	0	0	1	1
1975	4/8	1/6	2/1	2/11	0/1	1/4	2/1	12/32	4	4	0	0	3	1	0	5
TOTAL	7/19	1/13	2/4	3/20	2/2	2/12	3/6	20/76	6	5	1	1	5	1	3	7

*No. MA/No. BA

One 1974 B.S. Graduate teaches Music K-12

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6. Ayers, Jerry B. Report 75-6. A Report of Three Surveys of the 1975 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1975. (mimeo.), 26 pp.

CHAPTER II

PRESENTATION AND ANALYSIS OF DATA, 1975 B.S. GRADUATES

Chapter II contains a presentation and analysis of data for those individuals who received the B.S. in 1975 and were in their first year of the study. Information pertinent to those who received the M.A. is presented in Chapter III and comparisons of data obtained in the current year of the study with data obtained in past years is presented in Chapter IV. Means, standard deviations, frequency counts, correlations and appropriate statistical tests are presented in tabular form for the variables studied. Explanatory information is included to facilitate the reader's understanding and usage of the report.

The data are presented in nine parts with each corresponding to a major instrument used to gather information. Each section contains summary statistics as well as a discussion of the relevant variables that were correlated in the study. Table 4 shows an intercorrelation matrix of 44 selected variables, which is applicable to the B.S. graduates. No attempt was made to show a complete matrix of all variables. Only variables significant at or beyond the .05 level will be discussed in the remainder of this report.

An understanding of Chapter I of this report is essential for the effective utilization of the remainder of the report. Also, Reports 74-4 and 75-4 (1,2) should be used as companion guides to obtain additional information that may be of interest to the reader (in particular, copies of the relevant instruments and first and second year data). The attention of the reader is also called to the Appendix to this report. The Appendix contains a complete listing of all studies that have been conducted in the past six years that may provide additional useful information about the evaluation studies that have been conducted by the College of Education.

Career Base Line Data

This section contains a summary of preliminary career base line data for the B.S. 1975 subjects in this study. Included in this section is information taken from each subject's college transcript and other records available in the College of Education of the University. In general, it appeared that the subjects in this study may have achieved slightly above the mean for all graduates of the College of Education.

Table 5 shows a summary of the teaching level of the 32 B.S. level individuals. It will be noted that a large number were teaching in the lower grades.

The mean number of years of teaching experience (including 1975-76 as one year) was 1.6 years and the median years was 1.0. Some individuals in the study had taught prior to completing their degree and those individuals that had taught part of the 1974-75 school year listed their experience as one additional year.

The mean quality point average in the major teaching field of the graduates was 3.20 (SD= 0.42). This value approximated the mean major field quality point

TABLE 4

CORRELATION MATRIX OF SELECTED VA

GRADUATES IN FIRST YEAR OF

	X̄	SD	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
National Teacher Examination																								
1. Teaching Area Exam	590.4	85.5	28	1000	606	953	595	605	102	-186	-217	-057	-086	-407	063	053	-140	-201	-227	-171	-285	-246	-225	259
2. Prof. Ed. Test	216.4	49.9	31		1000	707	351	539	186	011	-114	034	010	-421	432	319	356	165	021	335	-344	-321	-107	242
3. Composite	1161.9	157.2	28			1000	497	604	205	-068	-157	-009	-088	-535	288	170	100	-194	-012	085	-311	-270	-262	327
Quality Point Average																								
4. Major Field	3.28	0.42	32				1000	519	-407	-246	-226	160	102	-214	-071	131	-266	069	-017	-077	-528	-326	002	035
5. Overall	3.10	0.39	32					1000	344	123	-067	-026	-034	-336	354	224	094	-182	-131	057	-012	-454	-131	-100
American College Test																								
6. Composite	20.6	11.2	25						1000	346	242	-164	-108	-171	224	309	389	-155	-302	093	638	-008	-107	-050
Principal Evaluation																								
7. I	4.2	0.7	28							1000	718	709	707	-457	537	703	648	136	094	525	143	-004	-056	182
8. II	4.5	0.7	29								1000	638	598	-191	462	603	657	275	278	597	138	137	041	178
9. III	4.3	0.7	28									1000	734	-472	247	333	283	227	217	354	-303	056	062	332
10. IV	4.3	0.7	28										1000	-487	348	680	657	144	134	580	198	086	010	190
California F-Scale																								
11. F-Scale	101.9	24.2	32											1000	-422	-265	-509	-302	-226	-481	353	271	-033	-202
Student Evaluation of Teaching -I																								
12. I	347.6	32.8	19												1000	679	754	200	497	854	-136	-270	015	-102
13. II	347.3	24.3	19													1000	701	278	151	722	070	049	287	-003
14. III	303.5	38.7	19														1000	268	437	867	-011	-224	032	-127
15. IV	4.8	38.5	19															1000	-013	476	-113	130	520	-281
16. V	247.5	48.6	19																1000	657	-369	-259	-085	-050
17. VI	310.1	25.7	19																	1000	-187	-181	185	-190
Interaction Analysis																								
18. I/d	3.18	3.25	28																		1000	306	100	-212
19. I/D	0.75	0.45	28																			1000	607	-119
20. ST/TT	0.51	0.19	28																				1000	-316
21. SII/Tot	0.39	0.35	28																					1000
22. Lec/Tot	0.50	0.14	28																					
Classroom Observation Record																								
23. 1	6.1	0.8	31																					
24. 2	5.7	0.8	31																					
25. 3	5.9	0.8	31																					
26. 4	5.8	0.8	31																					
27. 5	6.4	0.5	31																					
28. 6	6.2	0.8	31																					
29. 7	6.3	0.7	30																					
30. 8	6.4	0.6	30																					
31. 9	6.3	0.8	30																					
32. 10	5.7	0.8	30																					
33. 11	5.6	0.8	30																					
34. 12	6.4	0.6	30																					
35. 13	6.4	0.7	30																					
36. 14	6.5	0.7	30																					
37. 15	6.3	0.8	30																					
38. 16	6.3	0.7	30																					
39. 17	6.3	0.7	30																					
40. 18	6.1	1.0	30																					
41. 19	5.8	0.8	30																					
42. 20	6.4	0.7	30																					
43. 21	6.5	0.7	30																					
44. 22	5.8	0.8	30																					

* Underline indicates a correlation significant at or beyond the .05 level.
Decimal points have been omitted.

ED VARIABLES—1975 B.S.

AR OF STUDY*

20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
-223	259	045	-153	-234	-191	-199	-131	190	-125	018	-164	-039	012	-285	-289	-465	-425	-398	-458	-444	-036	-202	-315	023
-107	242	210	-300	-[illegible]	-204	210	-102	075	147	016	-154	-054	069	-222	-109	-285	-113	-067	-083	-232	139	-081	-248	-126
-262	327	093	-185	-197	-141	-089	-034	325	-029	174	-113	026	1[illegible]	-210	-242	-402	-361	-293	-360	-392	110	-065	-356	081
002	035	149	-237	-203	-157	-184	-104	-102	-097	010	111	-168	-297	-243	-124	-316	-356	-228	-348	-337	-147	-075	-269	-141
-181	-100	419	-342	-105	-256	-106	-028	132	034	149	198	-016	-171	-103	-205	-393	-324	-159	-376	-616	181	033	-302	-180
-107	-050	096	-124	096	066	147	279	248	125	170	055	145	260	155	-116	157	194	179	242	428	336	175	116	125
-056	182	137	-102	105	109	161	271	-028	248	00[illegible]	167	324	352	278	247	130	172	205	116	212	332	-076	057	030
044	178	-002	-113	172	-039	[illegible]6	179	-085	230	009	087	150	213	356	074	22[illegible]	168	081	089	300	075	-071	-024	-184
062	339	-029	102	147	242	277	252	-085	164	-071	096	[illegible]29	3[illegible]3	156	129	120	159	193	040	196	178	-147	052	188
010	190	-011	110	167	148	189	243	-082	178	009	083	320	389	358	137	130	160	153	117	206	183	-107	062	180
-033	-202	-065	157	181	140	-047	-244	-329	-134	-111	-157	-039	-102	144	069	171	347	055	211	467	-361	075	147	-146
015	-102	372	004	058	-121	135	186	347	503	581	295	138	178	312	259	112	117	219	294	090	374	459	-049	-032
287	-003	138	-210	-055	-114	087	124	011	187	165	040	-037	051	105	206	166	037	-037	223	155	059	119	-132	-230
032	-127	272	204	321	090	438	290	382	489	432	285	221	253	376	429	408	329	391	368	173	496	461	270	142
520	-381	-190	-612	031	-612	-254	-354	-241	-269	-330	-133	-650	-465	-321	046	-091	-087	-286	-165	-272	-363	-351	-179	-593
-085	-050	202	062	065	038	188	162	512	566	533	446	194	126	248	379	266	248	411	301	241	256	336	150	179
185	-190	219	-075	116	-191	1[illegible]	112	323	440	415	298	-015	049	216	392	261	221	242	297	121	249	304	052	-107
100	-222	-011	-149	162	-011	-083	009	-054	020	-129	035	039	-032	-009	-125	044	118	071	056	116	-025	-104	061	-035
607	-119	-835	-030	-192	182	-042	-281	-132	-091	-238	-113	-043	128	-082	-197	-054	-060	-216	-041	-063	-265	-260	034	008
1000	-316	-438	-197	-178	-108	048	-293	-108	-073	-160	020	-[illegible]	-217	-229	-047	-056	-154	-200	-046	-296	-181	-177	-073	-177
	1000	198	012	-109	007	-054	087	067	-037	-127	-323	277	388	-013	-062	018	-154	011	042	178	054	-127	-216	071
		1000	048	330	-196	092	123	040	097	174	015	153	-033	160	252	098	080	197	093	186	277	286	-078	-036
			1000	480	678	420	288	303	384	300	240	627	527	542	498	598	512	520	665	655	688	505	703	710
				1000	550	646	439	285	395	357	288	584	454	584	556	632	668	612	688	574	655	599	664	529
					1000	686	569	301	419	462	340	642	623	586	490	617	589	535	567	513	677	605	718	821
						1000	577	176	201	357	106	434	504	464	499	522	618	460	541	418	503	544	546	579
							1000	268	380	523	346	382	361	472	320	619	382	416	461	342	363	524	395	487
								1000	590	564	507	457	370	217	190	334	203	574	228	095	635	560	371	465
									1000	782	858	643	391	607	292	373	321	573	364	310	698	628	423	508
										1000	670	528	449	663	375	382	359	454	413	281	696	828	348	563
											1000	405	096	463	250	267	227	540	208	114	599	539	477	339
												1000	845	701	430	529	447	595	659	501	711	536	567	801
													1000	616	361	522	475	459	486	303	631	451	473	769
														1000	618	699	573	476	573	386	628	720	630	597
															1000	745	630	543	575	631	423	510	621	447
																1000	764	683	706	756	446	586	761	337
																	1000	758	803	836	355	536	715	427
																		1000	712	637	605	624	732	474
																			1000	744	315	597	662	448
																				1000	261	454	571	250
																					1000	697	528	647
																						1000	637	356
																							1000	616
																								1000

average of graduates who had participated in the first two years of the study. The mean overall undergraduate quality point average of the graduates was 3.10 (SD= 0.39), which also approximated that for participants in the first two years of the study. The major field quality point average correlated significantly in an inverse relationship with the indirect/direct teaching ratio found with the interaction analysis phase of the study. Thus it appeared that students with higher quality point averages in their teaching field tended toward the use of more direct teaching techniques. A significant negative relationship was noted between the major field quality point average and certain factors from the Classroom Observation Record. A similar correlation pattern was in evidence with the overall quality point average.

A total of 25 subjects had completed the American College Test prior to admission to the University. Mean scores for each of the four sub-tests and composite score are shown in Table 6. In general the subjects had achieved scores above the mean for all students enrolled in teacher education programs and the University. Significant correlations were noted between overall ACT scores and the overall quality point average achieved by the subjects and the i/d ratio from the interaction analysis.

Mean scores and standard deviations achieved by the 32 subjects on the National Teacher Examinations are shown in Table 7. The results indicated that the subjects had achieved at a slightly lower level than individuals in the first two years of the study. Overall the subjects ranked at about the 30th percentile on the Professional Education Test, about the 40th percentile on the Teaching Area Examination and the mean composite score was at about the 40th percentile.

An examination of the correlational pattern of scores from the NTE with selected variables (Table 4) was somewhat comparable with that from the past two years of the study, with the exception of scores from the COR and the teaching area examination. In this case the correlations were negative whereas in the past there has been a positive relationship. At this time no explanation can be offered for this apparent shift in direction.

General Information-Teacher Preparation Inventory

All subjects were asked to complete a rating sheet with regard to certain courses and other areas of emphasis related to their teacher education program. Data were obtained from all 32 subjects and are comparable with information from other studies of larger numbers of graduates (see Appendix for complete listing of reports). Table 8 shows the results of the survey conducted as a part of this study. This Table contains the percentage of subjects ratings of each area. In general the lowest ratings were given to the areas of (1) ability to work with parents, (2) skill in maintaining discipline, and (3) skill in working with exceptional children (the bright, the dull, and the handicapped). It should be noted that these areas have been rated as weaknesses in other studies conducted by the University. Also, these appear frequently in studies that have been conducted at other institutions of higher education.

The subjects were asked to rate the value of certain core education courses on a scale of 5 to 1 (very satisfactory to very unsatisfactory). Table 9 shows the results of this phase of the study. The courses receiving the

Table 5

Teaching Level of B.S. Subjects (N= 32)

Level	No.	Percent
Preschool (including kindergarten)	8	25.0
Grades 1-3	6	18.7
Non-graded-lower grades	1	3.1
Grades 4-7	11	34.4
Non-graded middle school	1	3.1
Grades 8-12	4	12.5
Special Education	1	3.1

Table 6

American College Test Scores for B.S. Graduates (N= 25)

Subtest	Mean	SD
English	18.8	5.2
Mathematics	16.5	4.9
Social Science	18.4	5.5
Natural Science	19.2	4.5
Composite	20.6	4.2

Table 7

National Teacher Examinations Scores for B.S. Graduates (N= 32)

Test	Mean	SD
Teaching Area Examinations	590.4	85.5
Professional Education Test	216.4	49.9
Composite Scores	1161.9	157.2

Table 8

Percentage Ratings of Selected Items Related to Undergraduate Teacher Preparation Program (N= 32)

Item	Very Unsatisfactory	Somewhat Unsatisfactory	Neither satisfactory nor Unsatisfactory	Somewhat Satisfactory	Very Satisfactory
1. Your teaching personality:					
a. Ability to work with children	0.0	3.1	6.2	31.2	59.4
b. Ability to work with colleagues	0.0	3.1	6.2	37.5	53.1
c. Ability to work with parents	3.1	12.5	12.5	34.4	37.5
2. Your general knowledge and understanding of:					
a. Sciences and Mathematics	0.0	3.1	15.6	50.0	31.2
b. Humanities	0.0	3.1	6.2	59.4	31.2
c. Social Sciences	0.0	6.2	3.1	53.1	37.5
3. Your ability to use the English language effectively	0.0	3.1	6.2	46.9	43.7
4. Your knowledge and understanding of the subjects which you teach	0.0	6.2	6.2	37.5	50.0
5. Your understanding of children and youth:					
a. Insight into causes of behavior	3.1	3.1	12.5	43.7	37.5
b. Skill in working with exceptional children (the bright, the dull, the handicapped)	3.1	12.5	21.9	50.0	12.5
c. Skill in maintaining discipline	3.1	9.4	18.7	43.7	21.9
6. Your understanding of the nature of the learning process	0.0	0.0	12.5	59.4	28.1
7. Your knowledge of sources of teaching materials	3.1	3.1	12.5	40.6	40.6
8. Your ability to use teaching materials effectively	0.0	0.0	12.5	34.4	50.0
9. Your knowledge and understanding of:					
a. The purposes of the school in relation to the over-all purpose of society	0.0	3.1	9.4	46.9	40.6
b. The social structure of the community and its meaning for education	0.0	6.2	12.5	40.6	37.5

lowest ratings were Introduction to Teaching, Social Foundations of Education, and History and Philosophy of Education. It should be noted that substantial changes have been made in these courses in recent years and most subjects completed the courses prior to those changes. The resulting changes have made the orientation of the courses more practical and less theoretical. In general, the subjects perceived more value in the courses involving practical applications and less value in the theoretical courses. These findings have been in evidence in other studies (see Appendix).

The subjects were asked to rate the quality of instruction in the College of Education. Over 75 percent rated the instruction as satisfactory to very satisfactory. However, on the negative side over 15 percent rated the instruction as being unsatisfactory.

Table 9

Percentage Ratings of Selected Courses
in Undergraduate Program (N= 32)

Item	Very Unsatisfactory	Somewhat Unsatisfactory	Neither Satisfactory nor Unsatisfactory	Somewhat Satisfactory	Very Satisfactory	Did Not Take At TTU
a. INTRODUCTION TO TEACHING	18.7	6.2	15.6	21.9	15.6	21.9
b. GENERAL PSYCHOLOGY	6.2	6.2	9.4	31.2	21.9	25.0
c. HUMAN GROWTH AND DEVELOPMENT	6.2	9.4	9.4	31.2	40.6	3.1
d. EDUCATIONAL PSYCHOLOGY	3.1	6.2	9.4	28.1	28.1	21.9
e. SOCIAL FOUNDATIONS OF EDUCATION	15.6	21.9	18.7	34.4	6.2	3.1
f. HISTORY AND PHILOSOPHY OF EDUCATION	9.4	21.9	6.2	25.0	31.2	6.2
g. EVALUATION AND GUIDANCE	6.2	12.5	15.6	31.2	31.2	3.1
h. METHODS COURSES	0.0	0.0	3.1	40.6	53.1	3.1
i. MICRO TEACHING	0.0	6.2	3.1	28.1	34.4	18.7
j. STUDENT TEACHING	0.0	3.1	3.1	21.9	65.6	6.2

Principal Evaluations of Subjects

The principal of each subject was asked to complete two instruments designed to evaluate weaknesses and strengths of the individual. The first instrument consisted of 59 items related to the teacher education program of the subjects and has been used for the past six years in the evaluative efforts of the Office of the Associate Dean. Table 10 shows the percentage ratings for each item. No area was rated significantly low by the principals. This is in contrast to studies conducted in the past in which several areas have consistently received low ratings.

Principals were also asked to complete the Teacher Evaluation by Supervisor form. This instrument consists of four questions encompassing the following areas: (a) subject matter competence, (b) relations with students, (c) appropriateness of assignments, and (d) overall effectiveness. Table 11 shows the mean ratings for each of these items for the B.S. level 1975 graduates.

An examination of the correlational pattern for the four variables with the other factors studied indicated results similar to those obtained in the past two years of the study. In general the students and the independent observers perceived the teachers as alert and attractive (items 11 and 12 from the COR).

Table 10

Percentage Ratings of Selected Items by Principals (N= 28)

Items	No opportunity to observe	Very unsatisfactory	Somewhat unsatisfactory	Neither satisfactory nor unsatisfactory	Somewhat satisfactory	Very satisfactory
Understanding the goals of the school	0.0	3.6	0.0	3.6	35.7	57.1
Personal appearance	0.0	3.6	0.0	0.0	17.8	78.6
Enthusiasm for the teaching profession	0.0	3.6	0.0	7.1	21.4	67.8
Adaptability in the classroom	3.6	3.6	0.0	7.1	32.1	53.5
Cooperation and dependability	0.0	3.6	0.0	3.6	17.8	75.0
Attitudes toward children	0.0	3.6	0.0	0.0	21.4	75.0
Attitudes toward fellow teachers	0.0	3.6	3.6	0.0	25.0	67.8
Attitudes toward supervisors	0.0	3.6	3.6	0.0	28.6	64.3
Accuracy in maintaining official records and reports	3.6	3.6	0.0	0.0	32.1	60.7
Understanding and using courses of study and curriculum guides	10.7	3.6	0.0	3.6	42.8	39.3
Making effective use of community resources	7.1	3.6	0.0	14.3	35.7	39.3
Handling disciplinary problems	0.0	7.1	7.1	0.0	42.8	42.8
Getting acquainted with the community and its people	14.3	3.6	3.6	10.7	42.8	32.1
Keeping abreast of recent professional developments	25.0	3.6	3.6	3.6	32.1	32.1
Evaluating pupil progress	0.0	3.6	3.6	7.1	32.1	53.6
Motivating pupils who seem disinterested	3.6	3.6	3.6	3.6	32.1	53.6
Relationships with parents	10.7	3.6	0.0	7.1	28.6	50.0
Participation in professional activities	7.1	3.6	0.0	10.7	25.0	53.6
Potential for advancement in the profession	0.0	3.6	0.0	10.7	21.4	64.3
Relationships with fellow teachers	0.0	3.6	0.0	7.1	17.9	71.4
Overall effectiveness of this person in comparison with other teachers in your school	3.6	7.1	3.6	3.6	21.4	60.7
Overall qualifications of this person to teach in your particular school situation	0.0	3.6	7.1	0.0	25.0	64.3
i. Teaching personality:						
a. Ability to work with children	0.0	3.6	0.0	3.6	17.9	75.0
b. Ability to work with colleagues	0.0	3.6	0.0	7.1	17.9	71.4
c. Ability to work with members of the community	14.3	3.6	0.0	10.7	17.9	53.6
d. Ability to maintain a friendly disposition	0.0	3.6	3.6	3.6	10.7	78.6
e. Ability to lead a well-rounded life, to enjoy work and play	14.3	3.6	0.0	7.1	7.1	67.8
f. Ability to work with parents	14.3	3.6	3.6	0.0	21.4	57.1

Table 10 (continued)

2. General knowledge and understanding of:						
a. The physical sciences	46.4	0.0	3.6	0.0	17.9	32.1
b. The biological sciences	42.8	0.0	3.6	3.6	17.9	32.1
c. American culture and institutions	46.4	0.0	3.6	3.6	10.7	35.7
d. Art, music, literature, philosophy	42.8	0.0	3.6	0.0	25.0	28.6
e. Mathematics	42.8	0.0	3.6	0.0	32.1	21.4
3. Ability to use the English language effectively	0.0	3.6	3.6	0.0	17.9	75.0
4. Knowledge and understanding of the subject taught	0.0	3.6	0.0	3.6	28.6	64.3
5. Understanding of children and youth:						
a. Insight into causes of behavior	0.0	3.6	3.6	10.7	42.8	39.3
b. Skill in working with exceptional children (the bright, the dull, the handicapped)	17.9	3.6	3.6	3.6	35.7	35.7
c. Skill in group work	0.0	3.6	3.6	7.1	28.6	57.1
d. Skill in maintaining discipline	0.0	7.1	3.6	10.7	28.6	50.0
e. Skill in guidance of children	3.6	7.1	3.6	3.6	28.6	53.6
6. Understanding of the nature of the learning process						
a. Skill in helping students determine objectives	14.3	3.6	3.6	7.1	32.1	39.3
b. Skill in motivating students	3.6	7.1	3.6	3.6	25.0	57.1
c. Skill in pupil-teacher planning	7.1	3.6	3.6	7.1	25.0	53.6
d. Skill in using a variety of teaching methods	3.6	7.1	3.6	10.7	14.3	60.7
e. Skill in evaluating pupil growth and class procedures with pupils	7.1	3.6	3.6	7.1	25.0	53.6
f. Ability to construct appropriate tests and learning materials	3.6	3.6	7.1	3.6	25.0	59.1
g. Skill in the application of learning theory in the classroom	3.6	3.6	3.6	7.1	25.0	57.1
h. Skill in providing differentiated learning experiences for various groups and individuals	7.1	3.6	0.0	3.6	32.1	53.6
7. Knowledge of sources of teaching materials:						
a. Printed materials	7.1	3.6	0.0	10.7	25.0	53.6
b. Audio-visual materials	3.6	3.6	3.6	3.6	25.0	60.7
c. Community resources	10.7	3.6	0.0	10.7	25.0	50.0
d. Library and library materials	3.6	3.6	3.6	7.1	25.0	57.1
8. Ability to use teaching materials effectively	3.6	7.1	0.0	7.1	14.3	67.8
9. Knowledge and understanding of:						
a. The purposes of the school in relation to the overall purpose of society	0.0	3.6	0.0	10.7	35.7	50.0
b. The social structure of the community and its meaning for education	10.7	3.6	3.6	7.1	25.0	50.0
c. The institutions of the community	21.4	3.6	0.0	7.1	28.6	29.3
d. The different value-patterns of social-economic classes	10.7	3.6	0.0	7.1	28.6	50.0
e. The economic life of the community	10.7	3.6	0.0	7.1	32.1	46.4
f. Appropriate ethical behavior of the teacher	7.1	3.6	3.6	3.6	10.7	71.4

Table 11

Means and Standard Deviations of Principals' Ratings of 1974 B.S. Graduates on Four Dimensions of Teaching (N= 30)*

Dimensions	Mean	SD
Subject Matter Competence	4.2	0.7
Relations With Students	4.5	0.7
Appropriateness of Assignments	4.3	0.7
Overall Effectiveness	4.3	0.7

*Ratings are on a 1-5 scale with 5 being the highest score.

Personality Scale

The California F-Scale Forms 45 and 40 was used to assess one aspect of the personality of the subjects. The F-Scale range of possible values is 28 to 196 with 112 the mid-point. The lower the value, the more non-authoritarian the indication. A total of 30 B.S. level 1975 graduates completed the instrument with a mean score of 101.9 and a standard deviation of 24.2. This indicated that the subjects in the study tended toward being non-authoritarian. Scores ranged from 52 to 159. In comparison, subjects from the first two years of the study achieved mean scores respectively of 112 and 104. Thus, the group in the third year of the study tended toward being more non-authoritarian than the previous two groups. As in the past two years of the study there appeared to be little relationship between the level of authoritarianism exhibited by the subjects and other factors in the study. Significant negative correlations were noted with several factors from the SET-I. There were significant positive correlations between the F-Scale scores and COR ratings on items 15, 18, and 19. Teachers with higher F-Scale scores tended toward being more steady, systematic and adaptable than low scorers on the F-Scale.

Student Evaluation of Teaching

Two forms of the Student Evaluation of Teaching were employed in the study. The SET-I was used with children in the classes of subjects above the third grade, while the SET-II was used with children below the fourth grade level. The instruments measure similar traits.

Table 12 shows the mean and standard deviation of the scores for each of the five factors and the composite score for the SET-I for the 19 B.S., 1975 graduates teaching above the third grade. The maximum possible score for any factor of the composite score is 400. Highest ratings were received on the factors of Friendly and Cheerful and Knowledgeable and Poised. This is in

agreement with the results of the first two years of the study. It should be noted that the mean scores on certain factors are as much as 37 points higher than from the second year of the study.

Table 13 shows the results of the administration of the SET-II in the classrooms of the 12 individuals teaching below the fourth grade. Mean scores on each of the five factors are similar to the results reported in the second year of the study. (see Report 75-4).

An examination of the correlational pattern of the SET-I with scores from other factors in the study approached those of first year subjects in the first year of the study (1973-74). No attempt was made to study the correlational pattern of the SET-II.

Interaction Analysis

A ten category interaction analysis system was utilized to record observed classroom behavior of the subjects. The system proposed by Amidon and Flanders (3) was implemented with the aid of three specially trained graduate assistants. A set of three to four observations was made on each subject. Each set contained from three to eight 20 minute periods of observation.

Table 14 shows a summary of the means and standard deviations of the various ratios for the observations. The data are comparable with that gathered during the previous two years of the study.

The I/D ratio in Table 14 is above the .50 average for teachers reported in the work of Campbell and Barnes (4). More indirect teaching has been associated in some studies with higher student achievement and positive attitude formation. The i/d ratio of 3.69 is also higher than the ratio of less than 1.00 reported for the average teacher. The subjects in this study used more acceptance of feeling, praising, or encouraging than average teachers. Other ratios in Table 14 are similar to the ratios of teachers reported in other studies.

Table 15 shows a summary of the average percentage of time spent by the B.S., 1975 graduates at various grade levels acting in each of the ten interaction categories. In general the amount of direct influence increases from the lower grades through the upper grades of the secondary school. The amount of time spent in lecture increased almost 75 percent from the lower grades through the upper levels of the high school.

Correlations of Interaction Analysis scores from subjects (see Table 4) indicated several minor correlations with scores from the COR similar to the resluts obtained in past studies. A significant negative correlation was noted between the ST/TT ratio and the Dull-Stimulating factor from the COR. A significant negative correlation was noted between the Sil/Tot ratio and the Harsh-Kindly factor from the COR, and a significant positive correlation of the Sil/Tot ratio and the Stereotyped-Original factor of the COR was noted.

Table 12

Student Evaluation of Teaching-I, 1975 B.S. Graduates (N= 19)

Factor	Mean	SD
Friendly and Cheerful	347.6	32.8
Knowledgeable and Poised	347.3	24.3
Lively and Interesting	303.5	38.7
Firm Control (Discipline)	304.8	38.5
Non-Directive (Democratic Procedure)	247.5	48.6
Composite Score	310.1	25.7

Table 13

Student Evaluation of Teaching-II (Grades K-3)
1975 B.S. Graduates (N= 12)

Factor	Mean	SD
Rapport	5.8	0.7
Interactional Competence	4.4	0.2
Stimulating, Interaction Style (Combination of Rapport and Interactional Competence)	10.2	0.9
Unreasonable Negativity	8.7	1.0
Fosterance of Self-Esteem	6.4	0.8

Table 14

Means and Standard Deviations for Interaction Analysis
1975 B.S. Graduates (N= 28)

Ratio	Mean	SD
Indirect/Direct Teaching (I/D)	0.75	0.40
Indirect/Direct Teaching (i/d)	3.69	2.69
Student Talk/Teacher Talk (ST/TT)	0.52	0.18
Silence/Total Teaching (Sil/Tot)	0.39	0.28
Lecture/Total Teaching (Lec/Tot)	0.52	0.12

Table 15

Average Percentage of Time Spent by 1975 B.S. Graduate (N= 29)
by Grade Levels Acting in Each of the Ten Interaction Categories*

Grade Level	1	2	3	4	5	6	7	8	9	10
Grades K-3 (N= 15)	0.0	9.0	0.4	11.8	24.7	6.8	0.6	15.9	11.0	19.7
Grades 4-6 (N= 7)	0.0	7.9	0.8	13.1	26.7	4.0	0.8	14.7	14.9	17.2
Grades 7-9 (N= 5)	0.0	7.9	0.6	15.1	30.8	3.0	0.0	16.3	12.5	13.9
Grades 10-12 (N= 2)	0.0	1.9	0.0	5.1	42.1	1.5	0.5	6.5	5.8	36.6
All Grades (N= 29)	0.0	8.1	0.5	12.2	27.4	5.1	0.6	15.0	11.8	19.3

*Categories 1-4, Indirect Influence of Teacher; 1=Accepts Feelings, 2=Praises or Encourages, 3=Accepts or Uses Ideas of Students, 4=Asks Questions.
Categories 5-7, Directo Influence of Teacher; 5=Lecturing, 6=Giving Directions, 7=Criticizing or Justifying Authority.
Categories 8-9, Student Talk; 8=Student Talk-Response, 9=Student Talk-Initiation.
Category 10, Silence or Confusion.

Classroom Observation Record

The Classroom Observation Record was completed on each subject by the observers at the conclusion of each visit. Items 1 through 4 of the instrument assess four dimensions of pupil behavior, and the remaining 18 items assess dimensions of teacher behavior. Table 16 contains a summary of the means and standard deviations for each of the 22 items of the instrument for the B.S. level 1975 graduates. The lowest mean score on the Pupil Behavior dimension was item 4 (Depending-Initiating). Lowest mean scores for the Teacher Behavior section were items 10 (Dull-Stimulating), 11 (Stereotyped-Original), 19 (Inflexible-Adaptable), and 22 (Narrow-Broad). It should be noted that several of these items have been found to be low in the first two years of the study.

Summary

In summary this chapter has presented an overview of the results of the second year of the application of the Tennessee Technological University Evaluation Model to a new group of (1975) B.S. level graduates. The career base line data gathered on the subjects in this study was comparable to that from other studies. The ratings of the teacher preparation program again are comparable with those obtained during the last several years. In general, principals rated the subjects quite highly in such areas as ability to work with fellow teachers, ethical behavior, and knowledge and understanding of the subject matter taught. Students perceived the subjects in a manner similar to the principals. Based on measures obtained with the California F-Scale, the subjects were to some degree non-authoritarian in their beliefs. Employing interaction analysis and a classroom observation scale revealed that the subjects were using more indirect than direct teaching methods and were exhibiting many of the characteristics of good teachers as reported in the literature. The results are similar to the first year results; however, significant differences were noted in the correlational patterns of the scores.

Table 16

Means and Standard Deviations for Each Dimension of the Classroom Observation Record, 1975 B.S. Graduates (N= 30)

Dimension	Mean	SD
Pupil Behavior		
1. Apathetic-Alert	6.1	0.8
2. Obstructive-Responsive	5.7	0.8
3. Uncertain-Confident	5.9	0.8
4. Depending-Initiating	5.8	0.8
Teacher Behavior		
5. Partial-Fair	6.4	0.5
6. Autocratic-Democratic	6.2	0.8
7. Aloof-Responsive	6.3	0.7
8. Restricted-Understanding	6.4	0.6
9. Harsh-Kindly	6.3	0.8
10. Dull-Stimulating	5.7	0.8
11. Stereotyped-Original	5.6	0.8
12. Apathetic-Alert	6.4	0.6
13. Unimpressive-Attractive	6.4	0.7
14. Evading-Responsible	6.5	0.8
15. Erratic-Steady	6.3	0.8
16. Excitable-Poised	6.3	0.7
17. Undertain-Confident	6.3	0.7
18. Disorganized-Systematic	6.1	1.0
19. Inflexible-Adaptable	5.8	0.8
20. Pessimistic-Optimistic	6.4	0.7
21. Immature-Integrated	6.5	0.7
22. Narrow-Broad	5.8	0.8

References

1. Ayers, Jerry B. Report 74-4. Tennessee Technological University Teacher Evaluation Model. Cookeville, TN: College of Education, Tennessee Technological University, 1974.

2. Ayers, Jerry B. Report 75-4. Tennessee Technological University Teacher Evaluation Model-Year II. Cookeville, TN: College of Education, Tennessee Technological University, 1975.

3. Amidon, Edmund J. and Flanders, Ned A. The Role of the Teacher in the Classroom, Minneapolis: Association for Productive Teaching, 1971.

4. Amidon, Edmund J. and Hough, J.B. Interaction Analysis: Theory, Research and Application, Reading, MA: Addison Wesley Publishing Company, 1967.

CHAPTER III

PRESENTATION AND ANALYSIS OF DATA, 1975 M.A. GRADUATES

Chapter III contains a presentation and analysis of data for those individuals who received the M.A. in 1975 and were participating in the study for the first year. Information pertinent to those who received the B.S. was presented in Chapter II. Means, standard deviations and/or frequency counts and correlations are presented in tabular form for the variables studied. Explanatory information is included to facilitate the reader's understanding and usage of the report.

The data are presented in seven parts with each section corresponding to a major instrument used to gather data. Each section contains summary statistics as well as a discussion of the relevant variables that were correlated in the study. Table 17 shows the intercorrelation matrix of 43 selected variables, which is applicable to the M.A. individuals in the study. Only variables significant at or beyond the .05 level will be discussed in the remainder of this report.

An understanding of Chapters I and II of this report is essential for the effective utilization of the remainder of the report. Also, Resports 74-4 and 75-4 should be used as a companion guide, to obtain additional information that may be of interest to the reader (in particular copies of relevant instruments and first year data).

Career Base Line Data

This section contains a summary of some preliminary career base line data for the M.A., 1975 subjects (N= 12) in the study. The subjects had taught a mean of 4.3 years with a range of experiences from 1 to 10 years. Their overall mean graduate quality point average was 3.75 with a standard deviation of 0.35. The mean Miller Analogies Test score for the group was 41.1 which placed them at approximately the 60 percentile based on national norms. Table 18 shows a summary of the teaching level of the 12 M.A. level individuals. It will be noted that a majority was teaching below the high school level.

Further information on the graduates of the M.A. program can be obtained through a variety of reports available through the Office of the Associate Dean of the College of Education. No further data will be given at this point.

General Information-Teacher Preparation Inventory

All subjects were asked to complete a rating sheet with regard to certain courses and other areas of emphasis related to their teacher preparation program. Data were obtained from all 12 subjects and are comparable with information from other studies of larger numbers of graduates. Table 19 shows the results of the survey conducted as a part of the study reported in this document. In general,

TABLE 17

CORRELATION MATRIX OF SELECTED VARIABLES—1975 M. A. GRA

	$\bar{X}$	SD	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
National Teacher Examination																								
1. Teaching Area Exam.	614.5	79.7	11	1000	637	913	252	597	-525	-130	-260	-134	-712	-279	449	-236	713	094	048	-336	027	-024	-096	-200
2. Prof. Ed. Test	227.5	36.9	12		1000	833	023	581	129	232	544	386	-371	534	752	464	-368	541	594	-208	194	408	206	-257
3. Composite	1199.5	140.3	11			1000	418	715	-406	-113	-028	-100	-628	-136	636	-104	636	154	177	-307	090	091	-007	-303
Quality Point Average																								
4. Overall Grad. AV.	3.75	0.36	12				1000	437	-219	-302	-099	-306	239	-458	-143	-418	615	-495	-406	194	044	-323	209	-257
American College Test																								
5. Composite	20.3	5.4	10					1000	-172	771	405	308	-486	-515	139	-563	630	-471	-473	101	102	213	190	-294
Principal Evaluation																								
6. I	4.1	0.9	9						1000	498	670	682	405	825	106	956	-835	632	697	542	-321	-039	-973	515
7. II	4.1	0.8	9							1000	591	591	-169	844	779	378	-473	860	709	604	-418	017	-705	681
8. III	4.1	0.8	9								1000	956	147	773	341	340	-767	495	472	838	206	511	-134	154
9. IV	4.1	0.8	9									1000	138	790	350	363	-487	502	634	780	138	480	-106	640
California F-Scale																								
10. F-Scale	90.3	15.8	11										1000	503	-061	474	-541	256	323	505	164	-262	415	-035
Student Evaluation of Teaching-I																								
11. I	317.7	50.1	6											1000	676	798	-783	915	917	361	054	160	480	340
12. II	348.3	28.2	6												1000	524	-149	815	835	027	-399	-014	-077	504
13. III	269.7	75.1	6													1000	-710	736	862	-093	-170	-122	427	384
14. IV	302.0	10.0	6														1000	-531	-559	-295	-530	-446	-816	164
15. V	249.5	74.6	6															1000	965	119	-254	-038	092	601
16. IV	297.3	38.1	6																1000	060	-298	-093	189	380
Interaction Analysis																								
17. I/d	1.59	1.37	11																	1000	138	059	-096	230
18. I/D	0.47	0.26	11																		1000	665	529	-855
19. ST/TT	0.49	0.38	11																			1000	392	-498
20. Sil/Tot	0.39	0.36	11																				1000	-591
21. Lec/Tot	0.58	0.18	11																					1000
Classroom Observation Record																								
22. 1	6.3	0.7	10																					
23. 2.	5.9	0.9	10																					
24. 3	6.2	0.9	10																					
25. 4	6.1	0.7	10																					
26. 5	6.6	0.5	10																					
27. 6	6.6	0.5	10																					
28. 7	6.7	0.5	10																					
29. 8	6.7	0.5	10																					
30. 9	6.5	0.7	10																					
31. 10	6.0	0.7	10																					
32. 11	5.8	0.4	10																					
33. 12	6.6	0.7	10																					
34. 13	6.8	0.4	10																					
35. 14	6.7	0.5	10																					
36. 15	6.7	0.5	10																					
37. 16	6.7	0.5	10																					
38. 17	6.7	0.5	10																					
39. 18	6.3	0.5	10																					
40. 19	6.4	0.5	10																					
41. 20	6.7	0.5	10																					
42. 21	6.6	0.5	10																					
43. 22	6.6	0.5	10																					

* Underline indicates a correlation significant at or beyond the .05 level. Decimal points have been omitted.

A. GRADUATES IN FIRST YEAR OF STUDY*

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
-200	487	-418	-271	-206	-101	-101	087	087	-127	411	483	207	154	087	087	087	087	472	-494	087	087	-101
-257	597	114	180	219	133	133	449	449	385	444	383	561	482	449	449	449	449	442	-127	449	213	447
-303	540	-214	-070	-074	130	130	377	377	223	527	564	457	334	377	377	377	377	426	-379	377	377	207
-257	-379	176	099	-380	088	088	268	268	351	572	622	200	-174	268	268	268	268	-013	-127	268	588	199
-294	434	-129	312	064	563	563	529	529	441	573	637	589	221	529	529	529	529	401	215	529	293	529
515	218	500	311	370	000	000	000	000	000	204	-667	207	436	000	000	000	000	-298	289	000	000	298
681	666	000	324	385	454	455	093	093	-113	-227	-277	316	545	093	093	093	093	-124	480	093	-207	124
154	534	612	763	679	365	365	408	408	500	000	000	508	534	408	408	408	408	000	354	408	000	364
640	502	601	486	400	363	408	408	408	364	000	-104	482	507	364	408	106	494	-090	368	496	-101	384
-035	-538	329	275	-024	-289	-289	-413	-413	043	-484	-140	-464	-560	-613	-413	-413	-413	-798	-212	-413	-113	316
340	393	347	337	382	-437	-437	-437	-437	-012	-814	-207	-437	000	-437	-437	-437	-437	-654	-437	-437	-397	-437
504	310	-270	-259	-428	-408	-408	-408	-408	-362	-316	371	-408	000	-408	-408	-408	-408	-099	-408	-408	-310	-408
384	080	359	141	286	-555	-555	-555	-555	-191	-812	-669	-555	000	-555	-555	-555	-555	-967	-555	-555	080	-555
164	-340	-635	-698	895	125	125	125	125	-365	700	431	125	000	125	125	125	125	563	125	125	340	125
601	541	-085	-104	044	-727	-727	-727	-727	-427	-839	-226	-727	000	-727	-727	-727	-727	-342	-727	-727	-541	-727
560	372	022	069	-003	-673	-673	-673	-673	-378	-780	-240	-673	000	-673	-673	-673	-673	-457	-673	-673	-372	-673
230	-055	475	716	287	-006	-006	-164	-164	134	-072	147	000	-334	-164	-164	-164	-164	319	167	-164	220	-125
-855	-035	364	542	475	-091	-091	099	099	557	055	387	-015	-296	099	099	099	099	069	-278	099	-123	-130
-498	099	368	390	420	042	042	271	271	466	184	300	190	062	271	271	271	271	587	233	271	265	317
-291	-615	265	-068	-257	-576	-576	-210	-210	190	015	271	-383	-496	-210	-210	-210	-210	088	-355	-210	-146	032
1000	154	-071	-215	-138	-016	-016	-216	-216	-571	-184	-558	013	275	-216	-216	-216	-216	-160	311	-216	-084	-027
	1000	-132	251	602	383	383	107	107	116	000	-158	-518	625	307	307	307	307	034	-064	307	064	064
		1000	718	533	148	148	447	447	628	381	-060	472	241	447	447	447	447	079	344	447	393	393
			1000	787	422	422	401	401	684	181	115	484	115	401	401	401	401	-150	281	401	187	187
				1000	[illegible]	408	405	405	532	000	-286	517	429	405	405	405	405	-096	175	405	117	117
						1000	802	802	609	323	102	739	612	802	802	802	802	089	667	802	583	583
						1000	802	802	609	323	102	739	612	802	802	802	802	089	667	802	583	583
							1000	1000	813	690	218	921	764	1000	1000	1000	1000	429	535	1000	802	802
							1000	1000	813	690	218	921	764	1000	1000	1000	1000	429	535	1000	802	802
								1000	813	690	218	921	764	1000	1000	1000	1000	429	535	1000	802	802
									1000	471	373	674	373	813	813	813	813	163	304	813	609	609
										1000	395	715	395	690	690	690	690	690	323	690	646	646
											1000	075	-250	218	218	218	218	327	-102	218	102	102
												1000	829	921	921	921	921	395	492	921	739	739
													1000	764	764	764	764	327	408	764	612	612
														1000	1000	1000	1000	429	535	1000	802	802
															1000	1000	1000	429	535	1000	802	802
																1000	1000	429	535	1000	802	802
																	1000	429	535	1000	802	802
																		1000	356	429	089	535
																			1000	535	250	667
																				1000	802	802
																					1000	583
																						1000

Table 18

Teaching Level of M.A. Subjects (N- 12)

Grade Level	No.	Percent
Kindergarten - Grade 3	4	33.3
Grades 4 - 6	3	25.0
Grades 7 - 9	2	16.6
Grades 10 - 12	1	8.3
Special Education	2	16.6

the lowest rating was given to the library and its holdings. The strongest area as perceived by the graduates was interest of the faculty in the students.

The subjects were asked to rate the value of certain core graduate education courses on a scale of 5 to 1 (very satisfactory to very unsatisfactory). Table 20 shows the results of this phase of the study. Courses receiving the highest ratings were those that are generally considered to be highly practical. No courses received substantially low ratings.

Principal Evaluation of Subjects

The principal of each subject was asked to complete two instruments designed to evaluate weaknesses and strengths of the individual. The first instrument consisted of 59 items related to the teacher preparation program of the subjects and has been used for the past six years in the evaluative efforts of the Office of the Associate Dean. Table 21 shows the percentage ratings for each item for the M.A. level, 1975 graduates. The ratings were similar to those reported for the 1975 B.S. level graduates.

Principals were also asked to complete the Teacher Evaluation by Supervisor Form. Table 22 shows the results for the 1974 M.A. graduates. In general, the ratings of these individuals were comparable with those of other groups in the study and for the 1974 M.A. level graduates. Comparison of the 1974 and 1975 data by use of the t-test indicated no significant differences at the .05 level of confidence.

The correlational pattern of the four factors from the principal's evaluation (Table 16) revealed results similar to those reported in Chapter II of this report. Similar results were in evidence in the study carried out in 1974-75.

Table 19

Percentage Ratings of Selected Items Related to Graduate Teacher Preparation Program (N= 12)

ITEM	Very unsatisfactory	Somewhat unsatisfactory	Neither satisfactory nor unsatisfactory	Somewhat satisfactory	Very satisfactory	No Opinion
a. Interest of professors in students	8.3	0.0	8.3	16.6	66.6	0.0
b. Announcements of deadlines	8.3	8.3	0.0	33.3	50.0	0.0
c. Accessibility of professors	8.3	8.3	0.0	41.6	25.0	0.0
d. Amount of guidance given in planning and carrying out program	8.3	0.0	0.0	50.0	33.3	0.0
e. Adequacy of library	16.6	8.3	8.3	50.0	16.6	0.0
f. Adequacy of Learning Resources Center in College of Education	0.0	8.3	0.0	66.6	25.0	8.3
g. Instruction in major field	8.3	0.0	16.6	25.0	50.0	0.0
h. Instruction in minor	8.3	0.0	0.0	41.6	50.0	0.0
i. Scheduling of courses	8.3	8.3	0.0	50.0	33.3	0.0

Table 20

Percentage and Number of Graduates Rating Quality of Various Courses (Maximum N= 12)

Course	No Respondents	Very unsatisfactory	Somewhat unsatisfactory	Neither satisfactory nor unsatisfactory	Somewhat satisfactory	Very satisfactory	Did not take
Educational Research	12	0.0	16.6	16.6	41.6	25.0	0.0
Educational Statistics	12	8.3	8.3	16.6	41.6	25.0	0.0
Field Experience or Practicum	12	8.3	0.0	0.0	33.3	41.6	8.3
Research Report or Problem	10	8.3	8.3	0.0	33.3	50.0	0.0
Public School Administration	8	8.3	0.0	0.0	8.3	16.6	41.6
Supervision of Instruction	6	0.0	0.0	0.0	16.6	8.3	50.0
Curriculum Development	6	0.0	0.0	8.3	0.0	50.0	25.0
Introduction to Guidance	8	8.3	8.3	0.0	8.3	16.6	41.6
Counseling Techniques	6	8.3	8.3	0.0	16.6	0.0	41.6
Measurment and Evaluation	8	8.3	8.3	16.6	8.3	0.0	33.3
Courses in the Teaching of Reading	4	0.0	8.3	0.0	16.6	33.3	25.0

Personality Scale

The California F-Scale Forms 45 and 40 was used to assess one aspect of the personality of the subjects. The 1975, M.A. subjects completed the instrument with a mean score of 90.3 and a standard deviation of 15.1. The subjects appeared to be less authoritarian than those individuals who had just completed the B.S. This supports the findings of a recent study by Ayers and Turck (1). Correlation of the F-Scale with selected variables indicated pattern similar to that reported for the B.S. level graduates.

Table 21

Percentage Ratings of Selected Items by Principals (N= 12)

ITEM	No opportunity to observe	Very unsatisfactory	Somewhat unsatisfactory	Neither satisfactory nor unsatisfactory	Somewhat satisfactory	Very satisfactory
Understanding the goals of the school	0.0	0.0	0.0	0.0	33.3	66.6
Personal appearance	0.0	0.0	0.0	0.0	22.2	77.7
Enthusiasm for the teaching profession	0.0	0.0	0.0	0.0	33.3	66.6
Adaptability in the classroom	0.0	0.0	0.0	0.0	33.3	66.6
Cooperation and dependability	0.0	0.0	0.0	11.1	33.3	55.5
Attitudes toward children	0.0	0.0	0.0	0.0	33.3	66.6
Attitudes toward fellow teachers	0.0	0.0	0.0	11.1	44.4	44.4
Attitudes toward supervisors	0.0	0.0	0.0	0.0	66.6	33.3
Accuracy in maintaining official records and reports	11.1	0.0	0.0	0.0	22.2	66.6
Understanding and using courses of study and curriculum guides	11.1	0.0	0.0	11.1	22.2	55.5
Making effective use of community resources	0.0	0.0	0.0	11.1	55.5	33.3
Handling disciplinary problems	0.0	0.0	11.1	11.1	33.3	44.4
Getting acquainted with the community and its people	0.0	0.0	0.0	0.0	66.6	33.3
Keeping abreast of recent professional developments	0.0	0.0	0.0	11.1	11.1	77.7
Evaluating pupil progress	0.0	0.0	0.0	11.1	22.2	66.6
Motivating pupils who seem disinterested	0.0	0.0	0.0	0.0	77.7	22.2
Relationships with parents	0.0	0.0	0.0	0.0	33.3	66.6
Participation in professional activities	0.0	0.0	0.0	11.1	44.4	44.4
Potential for advancement in the profession	0.0	0.0	0.0	11.1	33.3	55.5
Relationships with fellow teachers	0.0	0.0	0.0	0.0	55.5	44.4
Overall effectiveness of this person in comparison with other teachers in your school	0.0	0.0	0.0	0.0	44.4	55.5
Overall qualifications of this person to teach in your particular school situation	0.0	0.0	0.0	0.0	22.2	77.7

Table 21 Continued

1. Teaching personality:						
a. Ability to work with children	0.0	0.0	0.0	0.0	33.3	66.6
b. Ability to work with colleagues	0.0	0.0	0.0	0.0	33.3	66.6
c. Ability to work with members of the community	0.0	0.0	0.0	0.0	55.5	44.4
d. Ability to maintain a friendly disposition	0.0	0.0	0.0	0.0	44.4	55.5
e. Ability to lead a well-rounded life, to enjoy work and play	0.0	0.0	0.0	0.0	44.4	55.5
f. Ability to work with parents	0.0	0.0	0.0	0.0	44.4	55.5
2. General knowledge and understanding of:						
a. The physical sciences	22.2	0.0	0.0	0.0	33.3	33.3
b. The biological sciences	22.2	0.0	0.0	0.0	33.3	33.3
c. American culture and institutions	0.0	0.0	0.0	0.0	55.5	33.3
d. Art, music, literature, philosophy	0.0	0.0	0.0	0.0	33.3	66.6
e. Mathematics	0.0	0.0	0.0	0.0	33.3	66.6
3. Ability to use the English language effectively	0.0	0.0	0.0	11.1	22.2	66.6
4. Knowledge and understanding of the subject taught	0.0	0.0	0.0	0.0	22.2	77.7
5. Understanding of children and youth:						
a. Insight into causes of behavior	0.0	0.0	11.1	0.0	33.3	55.5
b. Skill in working with exceptional children (the bright, the dull, the handicapped)	0.0	0.0	11.1	0.0	55.5	33.3
c. Skill in group work	0.0	0.0	0.0	11.1	44.4	44.4
d. Skill in maintaining discipline	0.0	0.0	11.1	11.1	11.1	66.6
e. Skill in guidance of children	0.0	0.0	0.0	0.0	44.4	55.5
6. Understanding of the nature of the learning process						
a. Skill in helping students determine objectives	0.0	0.0	0.0	0.0	55.5	33.3
b. Skill in motivating students	0.0	0.0	0.0	0.0	55.5	44.4
c. Skill in pupil-teacher planning	11.1	0.0	0.0	0.0	33.3	55.5
d. Skill in using a variety of teaching methods	0.0	0.0	0.0	0.0	66.6	33.3
e. Skill in evaluating pupil growth and class procedures with pupils	0.0	0.0	0.0	11.1	44.4	33.3
f. Ability to construct appropriate tests and learning materials	0.0	0.0	0.0	0.0	44.4	55.5
g. Skill in the application of learning theory in the classroom	0.0	0.0	0.0	0.0	33.3	66.6
h. Skill in providing differentiated learning experiences for various groups and individuals	0.0	0.0	0.0	0.0	33.3	66.6
7. Knowledge of sources of teaching materials:						
a. Printed materials	0.0	0.0	0.0	0.0	44.4	55.5
b. Audio-visual materials	0.0	0.0	0.0	0.0	55.5	44.4
c. Community resources	0.0	0.0	0.0	0.0	77.7	22.2
d. Library and library materials	0.0	0.0	0.0	0.0	55.5	44.4
8. Ability to use teaching materials effectively	0.0	0.0	0.0	0.0	44.4	55.5
9. Knowledge and understanding of:						
a. The purposes of the school in relation to the overall purpose of society	0.0	0.0	0.0	0.0	33.3	66.6
b. The social structure of the community and its meaning for education	0.0	0.0	0.0	0.0	33.3	66.6
c. The institutions of the community	0.0	0.0	0.0	0.0	55.5	44.4
d. The different value-patterns of social-economic classes	0.0	0.0	0.0	0.0	33.3	66.6
e. The economic life of the community	0.0	0.0	0.0	0.0	33.3	66.6
f. Appropriate ethical behavior of the teacher	0.0	0.0	0.0	0.0	22.2	77.7

Student Evaluation of Teaching

Two forms of the Student Evaluation of Teaching were employed in the study. The SET-I was used with children of subjects above the third grade, while the SET-II was used with children of subjects below the fourth grade.

Table 23 shows the means and standard deviations of scores for the 6 M.A. level subjects teaching above the third grade. In general the scores were comparable with those from other groups. The correlational pattern of the six scores with the other variables in the study was similar to that reported in Chapter II.

Table 24 shows a summary of the results of the use of the SET-II with those M.A. Graduates teaching below the fourth grade level. The results are comparable with other groups in the study. No correlational study was made of these variables.

Comparisons of data for the SET-I and SET-II for 1975 and 1974 M.A. level graduates indicated no significant differences. There is a need for further study of these variables.

Table 22

Means and Standard Deviations of Principals' Ratings of 1975 M.A. Graduates on Four Dimensions of Teaching (N= 12)*

Dimensions	Mean	SD
Subject Matter Competence	4.1	0.9
Relations With Students	4.1	0.8
Appropriateness of Assignments	4.1	0.8
Overall Effectiveness	4.3	0.8

*Ratings are on a 1-5 scale with 5 being the highest score.

Interaction Analysis

Table 25 shows a summary of the means and standard deviations of the various ratios for the observations made as a part of the use of the Interaction Analysis with the M.A. 1975 graduates. The data are comparable with that gathered for the B.S. level individuals. It appeared that the M.A. graduates were using more indirect teaching techniques than the corresponding B.S. level graduates. The correlational patterns shown in Table 17 are similar to those for the B.S. level graduates (see Table 4). There were no significant

differences between the 1974 and 1975 M.A. graduates. However, there was an indication that the 1975 B.S. graduates were using more indirect teaching techniques than the M.A. graduates.

Table 23

Student Evaluation of Teaching-I, 1975 M.A. Graduates (N= 6)

Factor	Mean	SD
Friendly and Cheerful	317.7	50.1
Knowledgeable and Poised	348.3	28.2
Lively and Interesting	269.7	75.1
Firm Control (Discipline)	302.0	30.0
Non-Directive (Democratic Procedure)	249.5	74.6
Composite Score	297.3	38.1

Table 24

Student Evaluation of Teaching-II (Grades K-3), 1975 M.A. Graduates (N= 5)

Factor	Mean	SD
Rapport	5.7	0.2
Interactional Competence	4.6	0.3
Stimulating, Interaction Style (Combination of Rapport and Interactional Competence)	10.3	0.4
Unreasonable Negativity	10.3	0.6
Fosterance of Self-Esteem	7.0	0.3

Table 25

Means and Standard Deviations for Interaction Analysis
1975 M.A. Graduates (N= 11)

Ratio	Mean	SD
Indirect/Direct Teaching (I/D)	0.47	0.26
Indirect/ Direct Teaching (i/d)	1.59	1.37
Student Talk/Teacher Talk (ST/TT)	0.49	0.38
Silence/Total Teaching (Sil/Tot)	0.39	0.34
Lecture/Total Teaching (Lec/Tot)	0.58	0.18

Table 26

Average Percentage of Time Spent by 1975 M.A. Graduates (N= 11)
by Grade Levels Acting in Each of the Ten Interaction Categories*

Grade Level	1	2	3	4	5	6	7	8	9	10
Grades K-3 (N=4)	0.2	6.3	1.5	11.9	21.5	7.2	0.2	16.3	8.6	26.4
Grades 4-6 (N=3)	0.0	6.9	0.2	10.3	32.7	3.0	0.6	11.7	20.8	13.8
Grades 7-9 (N=1)	0.0	1.3	0.3	2.8	58.9	18.3	2.3	2.3	11.8	2.3
Grades 10-12 (N=2)	0.0	2.5	0.2	5.0	60.8	1.2	0.0	3.8	12.8	13.8
All Grades (N=10)	0.1	5.2	0.7	9.1	36.4	5.8	0.5	11.0	13.4	17.7

*Categories 1-4, Indirect Influence of Teacher; 1=Accepts Feelings, 2=Praises or Encourages, 3=Accepts or uses Ideas of Students, 4=Asks Questions.
Categories 5-7, Direct Influence of Teacher; 5=Lecturing, 6-Giving Directions, 7=Criticizing or Justifying Authority.
Categories 8-9, Student Talk; 8=Student Talk-Response, 9=Student Talk-Initiation.
Category 10, Silence or Confusion.

Classroom Observation Record

The Classroom Observation Record was completed on each subject by the observers at the conclusion of each visit. Items 1 through 4 of the instrument assess four dimensions of pupil behavior, and the remaining 18 items assess dimensions of teacher behavior. Table 27 contains a summary of the means and standard deviations for each of the 22 items of the instrument for the M.A. level, 1975 graduates. The lowest mean scores on the Teacher Behavior Scale was 11 (Stereotyped-Original): In general the ratings of the M.A. graduates were higher than for the B.S. graduates. Many of the characteristics of good teachers were noted in this phase of the study. The correlational patterns of the two groups, for this factor, were similar.

Summary

In summary this chapter has presented an overview of the results of the second year of the application of the Tennessee Technological University Evaluation Model to a new group of 1975 M.A. level graduates. The ratings of the teacher preparation program are comparable with those obtained in other larger studies. In general, principals rated the subjects high in all areas. However, some weaknesses were noted. Students perceived the subjects in a manner similar to the principals. Based on measures obtained with the California F-Scale the subjects were to some degree non-authoritarian in their beliefs. Employing interaction analysis and a classroom observation scale revealed that the subjects were using more indirect than direct teaching methods and were exhibiting many of the characteristics of good teachers as reported in the literature. The results are similar to the results obtained with B.S. level 1975 graduates and M.A. level 1974 graduates.

Table 27

Means and Standard Deviations for Each Dimension of the Classroom Observation Record, 1975 M.A. Graduates (N=11)

Dimension	Mean	SD
Pupil Behavior		
1. Apathetic-Alert	6.3	0.7
2. Obstructive-Responsive	5.9	0.9
3. Uncertain-Confident	6.2	0.9
Teacher Behavior		
5. Partial-Fair	6.6	0.5
6. Autocratic-Democratic	6.6	0.5
7. Aloof-Responsive	6.7	0.5
8. Restricted-Understanding	6.7	0.5
9. Harsh-Kindly	6.5	0.7
10. Dull-Stimulating	6.0	0.7
11. Stereotyped-Original	5.8	0.4
12. Apathetic-Alert	6.6	0.7
13. Unimpressive-Attractive	6.8	0.4
14. Evading-Responsible	6.7	0.5
15. Erratic-Steady	6.7	0.5
16. Excitable-Poised	6.7	0.5
17. Uncertain-Confident	6.7	0.4
18. Disorganized-Systematic	6.3	0.5
19. Inflexible-Adaptable	6.4	0.5
20. Pessimistic-Optimistic	6.7	0.5
21. Immature-Integrated	6.6	0.5
22. Narrow-Broad	6.6	0.5

References

1. Ayers, Jerry B. and Turck, Merton J. "Longitudinal Study of Change in Teacher Dogmatism", College Student Journal, 10(1):84-7, Spring, 1976.

CHAPTER IV

COMPARISON ANALYSES ACROSS THREE YEARS OS STUDY 1973, 1974, and 1975

During the course of operation of the Tennessee Technological University Teacher Evaluation Model data have been collected about a number of variables. The purpose of this chapter is to present a brief summary of some of the comparisons of data that have been made across the three years of the study. It should be noted that there are many other data analyses that will be performed in the future. The comparisons presented in this chapter are what were felt to be essential in making decisions with regard to continuation and modification of the basic teacher evaluation model.

This chapter is divided into three major sections as follows: correlational data, study of first year (1973) subjects across three years, and a comparison of all first year subjects across three years (1973, 1974, and 1975). It should be noted that the analyses are only representative of the type information that is available or that can be obtained.

Comparison of Correlational Data

The study of correlational data has been an essential factor in all three years of the study. In each year of the study intercorrelations have been computed for a number of variables on each first year group of subjects (see Tables 4 and 17 of this report for examples). As a continuation of the correlational studies an effort was made to compare the results of the first year's work (1973) with current results from the same group of subjects. Table 28 shows the means, standard deviations, and correlations for 40 variables for the subjects who have been in all three years of the study. Data for variables 1-7 were collected in the first year (1973) of the study, while data for variables 8 through 40 were collected in the fall of 1975 (during the third year of the study). It should be noted that the means and standard deviations shown for variables 1 through 7 include data for all first year subjects (1973, 1974 and 1975).

The correlational patterns for variables 1 through 7 when compared with the correlational pattern for the first year of the study (1973) are similar. The correlational pattern for variables 8 through 13 (Student Evaluation of Teaching-I) were again similar with the exception of variable 13, the composite score from the SET. In this case a larger number of significant correlations were noted between the composite score and variables from the Classroom Observation Record in the first year of the study.

In the present study it will be noted that there were few significant correlations for variables 14 through 18 (Interaction Analysis) and other factors in the study. However, in the first year of the study there were a number of positive correlations between the I/D and i/d ratios from the Interaction Analysis phase of the study and variables from the COR. Also, there were a number of significant negative correlations between the Lecture/Total ratio and variables

TABLE 28

CORRELATION MATRIX OF SELECTED VARIABLES FOR Ss IN STUDY THREE V

	X	SD	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
National Teacher Examination																					
1. Teaching Area Exam.	596.2	70.2	77	1000	589	-016	326	531	260	-042	262	164	155	949	135	195	-108	369	-090	218	079
2. Prof. Ed. Test	222.6	34.7	76		1000	-047	275	534	260	-115	306	189	144	-225	052	101	-152	536	120	388	063
3. Composite	1277.1	103.4	74			1000	333	-070	369	015	041	-059	156	-169	119	078	557	-191	227	-065	-055
Quality Point Average																					
4. Major Field	3.26	1.11	60				1000	672	884	-046	205	243	165	310	-625	164	-059	-064	-321	-013	632
5. Overall	2.92	0.57	83					1000	477	-114	526	389	115	-130	-323	075	-193	-063	-162	134	353
American College Test																					
6. Composite	19.2	10.0	58						1000	-093	340	203	273	-690	151	001	-428	080	-027	079	192
California F-Scale																					
7. F-Scale	109.3	73.5	69							1000	-133	-143	158	282	463	237	411	043	080	158	-028
Student Evaluation Teaching-1																					
8. I	338 4	44.4	14								1000	742	760	-418	459	751	362	063	079	098	288
9. II	355.0	25.5	14									1000	743	-196	525	707	237	089	128	128	395
10. III	298.0	56.5	14										1000	-232	784	912	487	290	334	-282	350
11. IV	300.2	32.2	14											1000	-181	014	-103	043	-556	-136	-054
12. V	275.9	36.8	14												1000	783	344	400	524	-122	030
13. VI	311.5	27.6	14													1000	476	286	147	-208	191
Interaction Analysis																					
14. I/d	1.43	1.37	23														1000	-154	182	010	169
15. I/D	0.44	0.32	23															1000	170	-031	-060
16. ST/TT	0.59	0.30	23																1000	-276	-141
17. Sil/Tot	0.39	0.28	23																	1000	-017
18. Lec/Tot	0.40	0.27	23																		1000
Classroom Observation Record																					
19. 1	5.3	2.5	19																		
20. 2	6.0	0.9	23																		
21. 3	5.7	0.9	23																		
22. 4	5.7	1.3	23																		
23. 5	5.5	1.3	23																		
24. 6	6.4	0.7	22																		
25. 7	5.7	1.3	23																		
26. 8	6.1	1.4	23																		
27. 9	6.1	1.3	23																		
28. 10	6.1	1.2	23																		
29. 11	5.8	1.2	23																		
30. 12	5.5	1.2	23																		
31. 13	6.1	1.0	23																		
32. 14	5.9	1.3	23																		
33. 15	6.5	0.6	23																		
34. 16	6.4	0.8	23																		
35. 17	6.5	0.7	23																		
36. 18	6.4	0.8	23																		
37. 19	6.3	0.8	23																		
38. 20	6.0	1.1	23																		
39. 21	6.1	1.2	23																		
40. 22	6.2	0.7	23																		

"Underline indicates a correlation significant at or beyond the .05 level. Decimal points have been omitted.

REE YEARS (DATA ON VARIABLES 8-40 COLLECTED DURING 1975-76) •

	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	079	-046	-036	-214	131	084	-007	-066	-087	084	079	000	-054	033	147	-122	-232	-100	-145	-010	039	-143	-204
	063	-099	-043	-133	-171	-081	245	-277	-270	-032	089	-235	-112	-082	-166	-100	-241	-351	-309	-218	-175	-163	-270
	-055	-163	275	337	260	287	229	221	150	176	197	039	101	231	221	205	175	175	175	220	015	176	283
	632	147	203	505	322	260	421	244	-155	387	504	-232	070	146	-045	371	-057	-230	-230	309	069	179	544
	353	321	-018	-179	-127	-164	189	-166	-182	-088	095	-191	-009	-015	-142	052	-206	-231	-291	-103	005	-208	003
	192	034	092	183	042	-088	-032	286	213	261	333	097	275	369	073	-033	-010	298	248	298	363	371	106
	-028	096	051	058	116	233	-065	107	174	174	085	186	208	051	348	299	259	301	286	364	-001	095	167
	288	280	285	290	170	152	245	009	181	284	545	112	323	067	078	222	309	284	169	203	550	-035	095
	395	482	298	424	484	366	436	158	311	420	497	478	358	161	148	650	695	494	473	350	596	105	141
	350	270	517	419	602	470	294	209	412	566	514	462	383	362	303	670	534	469	507	651	370	284	141
	-054	-256	-488	-258	-200	-275	-463	-489	-488	-468	-497	-385	-295	-497	-349	-031	-127	-426	-380	-075	-691	-472	117
	030	188	523	118	707	574	162	286	616	706	546	607	639	540	726	641	607	719	738	574	482	461	019
	191	162	350	287	495	357	130	061	277	416	439	312	203	139	277	568	527	402	397	458	309	145	180
	169	290	225	369	405	547	083	229	303	258	280	190	161	317	206	309	313	280	307	245	226	266	173
	-060	-194	138	-015	-095	009	-050	-147	-063	072	-015	-066	-076	-083	074	-076	-100	-131	-042	085	-241	-033	-099
	-141	210	260	-108	075	107	369	029	066	175	115	153	105	063	056	205	086	-001	093	-081	-028	002	-032
	-017	283	-146	-151	-009	140	044	081	116	-046	-010	033	-014	035	047	-217	-120	-001	-024	-146	083	-037	-232
	1000	436	423	353	299	325	332	030	177	215	234	126	285	355	053	527	375	290	313	344	192	299	409
		1000	561	028	302	355	414	232	481	048	047	240	077	284	128	428	265	182	259	-080	136	167	212
			1000	241	423	426	580	051	395	151	-006	134	021	359	201	478	223	108	234	044	002	247	055
				1000	604	680	539	655	514	701	641	533	576	474	464	551	745	628	688	724	586	737	635
					1000	879	491	696	783	815	651	818	778	819	776	737	691	729	797	631	678	802	427
						1000	548	724	737	792	599	736	698	715	708	646	693	696	805	666	638	775	407
							1000	586	350	543	471	484	368	283	303	563	538	326	442	188	365	477	440
								1000	788	794	719	788	723	621	740	365	646	767	790	637	792	841	639
									1000	714	645	814	726	825	834	508	678	811	839	508	755	843	449
										1000	891	875	898	749	844	604	729	825	858	797	811	851	622
											1000	741	817	702	776	468	704	796	744	640	850	775	728
												1000	901	751	853	593	740	872	891	747	823	810	502
													1000	823	836	642	760	870	883	777	802	850	552
														1000	807	535	556	752	761	577	720	840	407
															1000	470	652	852	830	616	783	816	492
																1000	759	552	660	592	369	554	457
																	1000	868	900	676	787	752	666
																		1000	965	731	894	855	643
																			1000	769	827	890	614
																				1000	593	686	562
																					1000	802	550
																						1000	626
																							1000

from the COR.

The intercorrelational pattern between the first year of the study and the present year (1975) for variables 19 through 40 (Classroom Observation Record) were similar. No explanation can be offered at this time for the differences in the correlational patterns between the two separate years of the study.

In a further attempt to study the variations in the correlational patterns across the three years of the study, Table 29 was constructed. This table shows a comparison of the number of significant correlations for each of the years of the study for first year subjects. The number of significant correlations has generally decreased across the three years (1973 "a", 1974 "b" and 1975 "c") for variables 1 through 21. The number of significant correlations noted for variables 22 through 43 (Classroom Observation Record) has remained constant across the three years of the study. At this time no explanations can be offered for the variation in correlational patterns.

Comparison Study of Subjects Who Have Been in Study Three Years

This section presents a summary of a comparison of the information collected on those subjects who initially entered the study in 1973 and have remained in the project for three years. Comparison data are presented for four primary instruments used in the study. The principal statistical tool used to determine significant differences was the analysis of variance technique. In 1973 a total of 53 subjects entered the program. This number has been reduced by attrition to 32 in 1974 and 26 in 1975.

Principals' Ratings

Table 30 shows a comparison of the means and standard deviations for the principals ratings of the subjects across the three year period. Table 31 shows the results of the application of the analysis of variance technique. There were no significant differences in the ratings given by the principals on each of the four factors of the instrument across the three year period. In general the subjects received ratings in excess of 4 on a scale of 5 to 1, with 5 being the highest possible score.

Table 30

COMPARISON OF PRINCIPALS' RATINGS ACROSS THREE YEARS (1973-1975) FOR SUBJECTS IN STUDY FOR TOTAL PERIOD

Factor	GRP 1973 (N=46)		GRP 1974 (N=25)		GRP 1975 (N=20)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	4.09	0.73	4.08	0.76	4.15	0.75
II	4.11	0.85	4.08	0.95	4.15	0.88
III	4.18	0.72	3.92	0.70	4.35	0.75
IV	4.09	0.70	4.08	0.81	4.10	0.79

TABLE 20

COMPARISONS OF SIGNIFICANT CORRELATIONS FOR F

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
National Teacher Examination																					
1. Teaching Area Exam	######	abc	abc	bc	bc	######	######	######	######	-b-c	######	######	######	######	######	######	######	######	######	######	a
2. Prof. Ed. Test		######	abc	abc	abc	######	######	######	######	-b-c	c	a	######	######	######	######	######	######	######	######	######
3. Composite			######	abc	bc	######	######	######	######	-b-c	######	######	######	-a-b	######	######	######	-a	######	######	a
Quality Point Average																					
4. Major Field				######	bc	######	######	######	######	a	######	######	######	######	######	######	-c	c c	######	######	######
5. Overall					######	######	######	######	######	######	c	######	######	######	######	######	######	a-c	######	######	######
Principal Evaluation																					
6. I						######	abc	abc	abc	-c	-b-c	c	ac	b	-b	ac	######	######	######	######	######
7. II							######	abc	abc	######	ac	c	ac	######	-b	c	######	######	######	######	######
8. III								######	abc	-c	-b	######	######	-b	-b	-a-b	######	######	######	c	######
9. IV									######	-c	-b	c	a-bc	-b	-b	a-bc	######	######	######	######	######
California F-Scale																					
10. F-Scale										######	-c	######	-b-c	######	-b	######	######	######	######	######	######
Student Evaluation of Teaching-I																					
11. I											######	c	abc	b	abc	abc	######	######	######	######	######
12. II												######	bc	ab	b	abc	######	######	######	######	######
13. III													######	b	bc	abc	a	######	######	######	######
14. IV														######	-a	bc	b	######	c	######	######
15. V															######	ac	b	######	######	######	######
16. VI																######	######	######	######	######	######
Interaction Analysis																					
17. I/d																	######	a	######	######	######
18. I/D																		######	c	-b	-a-b-c
19. ST/TT																			######	-a	-c
20. Sil/Tot																				######	######
21. Lec/Tot																					######
Classroom Observation Record																					
22. 1																					
23. 2																					
24. 3																					
25. 4																					
26. 5																					
27. 6																					
28. 7																					
29. 8																					
30. 9																					
31. 10																					
32. 11																					
33. 12																					
34. 13																					
35. 14																					
36. 15																					
37. 16																					
38. 17																					
39. 18																					
40. 19																					
41. 20																					
42. 21																					
43. 22																					

* a or -a = significant correlation, 1973; b or -b = significant correlation, 1974; and c or -c = significant correlation, 1975.
# = no significant correlation in any of the three years.

FOR FIRST YEAR [illegible] IN 1973, 1974, AND 1975. *

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
a	b	b	b	b	-ab	[illegible]	b	b	[illegible]	[illegible]	b	[illegible]	[illegible]	b-c	-c	b-c	-c	b-c	[illegible]	b	b-c	b
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	b	[illegible]	[illegible]	[illegible]	b	[illegible]	b	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	b	b
a	[illegible]	[illegible]	[illegible]	b	b	bc	b	b	b	b	b	[illegible]	[illegible]	-c	-c	[illegible]	-c	-c	[illegible]	b	b-c	b
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-c	-c	[illegible]	-c	-c	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	-c	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	b	[illegible]	[illegible]	[illegible]	[illegible]	-c	-c	b	-c	-c	[illegible]	[illegible]	[illegible]	b
[illegible]	ab	[illegible]	a	[illegible]	[illegible]	[illegible]	a	[illegible]	[illegible]	[illegible]	ac	a	[illegible]	[illegible]	[illegible]	[illegible]	a	ab	a	[illegible]	[illegible]	[illegible]
[illegible]	a	a	a	a	a	[illegible]	a	a	a	a	a	abc	a	[illegible]	b	a	b	b	ab	ab	b	a
[illegible]	b	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	c	c	[illegible]	[illegible]	a	b	b	b	b	[illegible]	a	b	[illegible]
[illegible]	a	a	a	a	a	[illegible]	a	a	a	a	c	a	a	a	a	a	a	a	[illegible]	a	[illegible]	a
[illegible]	[illegible]	[illegible]	-a	[illegible]	[illegible]	-a-b	[illegible]	[illegible]	[illegible]	-a	[illegible]	-a	[illegible]	-a	-a-c	[illegible]	-a	-a-c	-c	[illegible]	[illegible]	[illegible]
[illegible]	a	a	a	[illegible]	a	a	ac	ac	[illegible]	[illegible]	[illegible]	a	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	a	a	[illegible]	ab
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	b	[illegible]	[illegible]	a	a	[illegible]	b	[illegible]	-b	[illegible]	[illegible]	b	[illegible]	[illegible]	[illegible]	b	[illegible]	b
[illegible]	a	a	a	c	ab	a	c	ac	[illegible]	[illegible]	b	a	ac	[illegible]	[illegible]	b	[illegible]	[illegible]	ac	abc	[illegible]	ab
[illegible]	-c	[illegible]	-c	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-c	-c	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-c
[illegible]	[illegible]	[illegible]	a	a	b	bc	c	c	c	[illegible]	b	[illegible]	[illegible]	[illegible]	[illegible]	b	[illegible]	[illegible]	[illegible]	b	[illegible]	ab
[illegible]	a	a	a	[illegible]	ab	a	ac	ac	a	[illegible]	b	a	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	a	a	[illegible]	ab
[illegible]	a	[illegible]	a	a	a	a	[illegible]	a	[illegible]	a	a	[illegible]	a	a	[illegible]	[illegible]	a	a	a	[illegible]	a	a
[illegible]	a	a	a	[illegible]	a	a	a	a	[illegible]	a	a	a	a	a	a	[illegible]	[illegible]	a	a	a	a	a
-a-b-c	a	a	a	[illegible]	a	a	a	a	[illegible]	a	a	a	a	a	a	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
-c	-c	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-c	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-c	[illegible]	-c	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-a	-a	-a	-a	[illegible]	[illegible]	[illegible]	[illegible]	-a	[illegible]	b
[illegible]	-a	-ac	[illegible]	[illegible]	-a	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	abc	abc	abc	abc	abc	abc	ab	ab	abc	abc	abc	ac	abc	abc	abc	abc	abc	abc	ac	abc	abc
		[illegible]	abc	abc	abc	ab	abc	ac	a	abc	abc	abc	ac	abc	ac	abc	abc	abc	abc	ac	abc	abc
			[illegible]	abc	abc	abc	abc	abc	ac	abc	abc	ac	ac	ac	abc	abc	ac	abc	abc	ac	abc	abc
				[illegible]	abc	ab	ab	abc	a	abc	abc	abc	ac	abc	abc	abc	abc	abc	abc	abc	abc	abc
					[illegible]	ab	abc	abc	abc	abc	abc	ab	a	abc	ab	abc	ab	ab	abc	abc	abc	abc
						[illegible]	abc	abc	abc	abc	abc	a	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc
							[illegible]	abc	abc	abc	abc	ac	abc	abc	abc	abc	ab	abc	abc	abc	abc	abc
								[illegible]	abc	ab	abc	a	ab	ab	abc	ab	ab	abc	abc	abc	abc	abc
									[illegible]	abc	abc	ac	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc
										[illegible]	abc	ac	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc
											[illegible]	ac	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc
												[illegible]	abc	abc	abc	abc	abc	abc	abc	abc	abc	abc
													[illegible]	abc	abc	abc	abc	abc	abc	abc	abc	abc
														[illegible]	abc	abc	abc	abc	abc	abc	abc	abc
															[illegible]	abc	abc	abc	abc	abc	abc	abc
																[illegible]	abc	abc	abc	abc	abc	abc
																	[illegible]	abc	abc	abc	abc	abc
																		[illegible]	abc	abc	abc	abc
																			[illegible]	abc	abc	abc
																				[illegible]	abc	abc
																					[illegible]	abc
																						[illegible]

Table 31

Comparison of Principals' Ratings of Same Subjects
1973-75 (3 Years) by use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
Factor-I				
Between	2	0.07	0.03	0.06
Within	88	48.04	0.54	
Total	90	48.11		
Factor-II				
Between	2	0.05	0.03	0.03
Within	88	68.85	0.78	
Total	90	68.90		
Factor-III				
Between	2	2.17	1.08	0.13
Within	86	44.94	0.52	
Total	88	47.10		
Factor-IV				
Between	2	0.01	0.01	0.01
Within	86	49.28	0.57	
Total	88	49.29		

Student Evaluation of Teaching

Table 32 shows a comparison of the means and standard deviations for each of the five factors and the total score (VI) for the Student Evaluation of Teaching for the three year period. Table 33 shows the results of the application of the analysis of variance technique. It was noted that there was no significant difference in the ratings of the subjects by their students across the three year period. Comparisons of the data with the work of Sandefur and Adams (1) indicated similar results for subjects in the first year of their study (1973).

Table 32

Comparison of SET-I Scores Across Three Years (1973-1975)
For Subjects in Study For Total Period

Factor	GRP 1973 (N=35)		GRP 1974 (N=26)		GRP 1975 (N=14)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	334.0	51.1	341.3	40.8	338.4	44.4
II	342.9	53.7	347.6	31.1	355.0	25.5
III	304.8	61.1	297.3	52.7	298.0	56.5
IV	308.3	37.5	303.2	38.7	300.2	32.2
V	250.2	48.3	260.0	52.5	275.9	36.8
VI-Total	309.1	32.0	313.8	31.2	311.5	27.6

Table 33

Comparison of SET-I Scores of Same Subjects 1973-75 (3 years)
By Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
Factor-I				
Between	2	807.0	403.5	0.19
Within	72	156,250.0	2,170.1	
Total	74	157,057.0		
Factor-II				
Between	2	1,504.0	752.0	0.42
Within	72	130,558.0	1,813.3	
Total	74	132,062.0		
Factor-III				
Between	2	982.0	491.0	0.15
Within	72	237,836.0	3,303.3	
Total	74	238,818.0		

Table 33 (continued)

Factor-IV				
Between	2	794.0	397.0	0.29
Within	72	98,803.0	1,372.3	
Total	74	99,597.0		
Factor-V				
Between	2	6,704.0	3,352.0	1.46
Within	72	165,773,0	2,302,4	
Total	74	172,477.0		
Factor-VI-Total				
Between	2	334.0	167.0	0.17
Within	72	69,094.0	959.6	
Total	74	69,428.0		

Interaction Analysis

Table 34 shows the means and standard deviations across three years from the results of the application of the interaction analysis technique. Table 35 shows the results of the application of the analysis of variance technique to the data. A significant difference (at the.05 level) was noted in the Lecture/Total ratio. Application of a t-test indicated that there were significant differences between the first and third year and the second and third year. In general, it appeared that the amount of lecturing to total teaching had increased from the first to the third year.

Table 34

Comparison of Ratios From Interaction Analysis Across Three Years (1973-1975) for Subjects in Study for Total Period

Ratio	GRP 1973 (N=43)		GRP 1974 (N=26)		GRP 1975 (N=23)	
	X	SD	X	SD	X	SD
i/d	1.62	2.00	1.53	1.07	1.16	1.08
I/D	0.78	0.77	0.71	0.32	0.47	0.30
ST/TT	0.61	0.59	0.55	0.37	0.39	0.24
Sil/Tot	0.45	0.95	0.33	0.35	0.31	0.27
Lec/Tot	0.56	0.21	0.44	0.16	0.59	0.16

Table 35

Comparison of Ratios From Interaction Analysis of Same Subjects 1973-75 (3 Years) by Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
i/d Ratio				
Between	2	3.1	1.6	1.05
Within	89	136.2	1.5	
Total	91	139.3		
I/D Ratio				
Between	2	0.5	0.2	0.34
Within	89	62.8	0.7	
Total	91			
ST/TT Ratio				
Between	2	0.7	0.4	1.64
Within	89	19.4	0.2	
Total	91	20.1		
Sil/Tot Ratio				
Between	2	0.4	0.2	0.41
Within	89	42.5	0.5	
Total	91	42.9		
Lec/Tot Ratio				
Between	2	0.3	0.14	4.27*
Within	89	3.0	0.03	
Total	91	3.3		

*Significant at the .05 level.

Classroom Observation Record

Table 36 shows a comparison of the means and standard deviations from the 22 items of the Classroom Observation Record across the three years of the study. Table 37 shows the results of the application of the analysis of variance technique to the data. Fourteen variables were found to be significantly different (beyond the .05 level) across the three year period. Application of the t-test, in all cases, indicated that there were significant differences between the first and second year data and between the second and third year data. In no case was there a difference between the first and third year data. It is believed, that due to the somewhat subjective nature of the instrument, that the generally low scores obtained during the second year of the study were due to a function of the training that the graduate assistants received. Although every effort was made to achieve reliability in the data gathering process, difficulties arose across the three years of the study. Therefore, it is hypothesized that there were no significant differences across the three years. This hypothesis will be tested in the extension of the study into the fourth year for the subjects in this phase of the data analyses.

Table 36

Comparison of COR Scores Across Three Years (1973-1975)
For Subjects in Study for Total Period

Factor	GRP 1973 (N=46)		GRP 1974 (N=26)		GRP 1975 (N=23)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1	6.0	0.9	5.1	1.2	6.0	0.9
2	5.8	0.9	5.0	1.1	5.7	0.9
3	5.6	1.0	4.9	1.1	5.6	1.3
4	5.2	1.2	4.9	1.3	5.5	1.3
5	6.1	0.8	5.5	1.1	6.4	0.7
6	5.7	1.0	5.2	1.1	5.7	1.3
7	6.1	0.9	5.5	1.4	6.1	1.4
8	6.2	0.8	5.4	1.2	6.1	1.3
9	6.2	0.7	5.8	0.9	6.1	1.2
10	5.7	1.0	5.2	1.2	5.8	1.2
11	5.4	1.1	5.2	1.1	5.5	1.2
12	6.1	0.8	5.5	0.9	6.1	1.0
13	6.3	0.7	5.3	0.9	5.9	1.3

Table 36 (continued)

14	6.3	0.8	5.7	0.9	6.5	0.6
15	5.9	1.0	5.3	1.0	6.4	0.8
16	6.1	1.0	5.5	0.9	6.5	0.7
17	5.8	1.1	5.3	1.0	6.4	0.8
18	6.1	1.0	5.5	1.0	6.3	0.8
19	5.8	1.1	5.3	1.1	6.0	1.1
20	5.8	1.1	5.3	1.1	6.1	1.2
21	6.0	0.9	5.4	0.8	6.2	0.7
22	5.8	0.8	5.1	1.0	5.8	1.2

Table 37

Comparison of COR Ratings of Same Subjects 1973-1975 (3 Years)
By Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
Factor-1				
Between	2	14.8	7.4	7.71**
Within	92	88.6	1.0	
Total	94	103.4		
Factor-2				
Between	2	11.3	5.7	6.19**
Within	92	84.1	0.9	
Total	94	95.4		
Factor-3				
Between	2	10.0	5.0	3.99*
Within	92	115.0	1.3	
Total	94	125.0		

Table 37 (continued)

Factor-4				
Between	2	5.0	2.5	1.58
Within	92	144.3	1.6	
Total	94	149.3		
Factor-5				
Between	2	9.0	4.5	6.19**
Within	91	66.0	0.7	
Total	93	75.0		
Factor-6				
Between	2	5.6	2.8	2.33
Within	92	111.3	1.2	
Total	94	116.9		
Factor-7				
Between	2	2.2	3.6	2.54
Within	92	129.6	1.4	
Total	94	136.7		
Factor-8				
Between	2	9.8	4.9	4.16**
Within	92	108.9	1.2	
Total	94	118.7		
Factor-9				
Between	2	3.4	1.7	2.20
Within	92	71.1	0.8	
Total	94	74.5		

Table 37 (continued)

Factor-10				
Between	2	5.2	2.6	1.97
Within	92	121.4	1.3	
Total	94	126.6		
Factor-11				
Between	2	1.8	0.9	0.75
Within	92	112.3	1.2	
Total	94	114.1		
Factor-12				
Between	2	8.1	4.1	5.53**
Within	92	67.5	0.7	
Total	94	75.6		
Factor-13				
Between	2	13.9	7.0	7.74**
Within	92	82.6	0.9	
Total	94	96.5		
Factor-14				
Between	2	8.4	4.2	6.88**
Within	92	56.2	0.6	
Total	94	64.6		
Factor-15				
Between	2	15.7	7.8	8.37**
Within	92	86.2	0.9	
Total	94	101.9		

Table 37 (continued)

Factor-16				
Between	2	13.5	6.7	8.23**
Within	92	75.4	0.8	
Total	94	88.9		
Factor-17				
Between	2	14.5	7.2	7.27**
Within	92	91.5	1.0	
Total	94	105.9		
Factor-18				
Between	2	9.4	4.7	4.78**
Within	92	90.6	1.0	
Total	94	100.0		
Factor-19				
Between	2	5.7	2.8	2.20
Within	90	116.3	1.3	
Total	92	122.0		
Factor-20				
Between	2	7.2	3.6	2.87
Within	91	113.6	1.2	
Total	93	120.8		
Factor-21				
Between	2	10.3	5.1	7.47**
Within	91	62.7	0.7	
Total	93	73.0		

Table 37 (continued)

Factor-22				
Between	2	9.0	4.5	4.93**
Within	90	82.5	0.9	
Total	92	91.5		

* Significant at the .05 level.
**Significant at the .01 level.

Comparison Study of All First Year Subjects 1973, 1974 and 1975

This section presents a summary of a comparison of the information gathered on all first year B.S. level subjects, i.e., 1973, 1974, and 1975 graduates. Comparison data are presented from eight sources. The principal statistical tool used to determine significant differences was the analysis of variance technique. The total number of subjects for each year was as follows: 1973, N=49; 1974, N=33 and 1975, N-32.

National Teacher Examinations

Table 38 shows the means and standard deviations of scores from the Teaching Area Examination, Professional Education Test and Composite for the National Teacher Examinations for each of the three years. Also shown is the composite score for all years. Table 39 shows the application of the analysis of variance technique for the data across the three years. There were no significant differences across the three years. In general the subjects achieved scores on the NTE at or slightly below the 50 percentile (National Norms).

Table 38

Comparison of National Teacher Examinations Scores
For First Year Subjects 1973-1975 by Year

Test	GRP 1973 (N=48) $\bar{X}$	SD	GRP 1974 (N=27) $\bar{X}$	SD	GRP 1975 (N=28) $\bar{X}$	SD	Composite (N=103) $\bar{X}$	SD
Tch. Area Exam.	591.4	66.9	604.3	75.3	590.4	85.5	594.5	73.9
Prof. Ed. Test	218.5	31.1	229.5	39.2	216.4	49.9	220.7	39.4
Composite	1,140.6	114.6	1,174.9	148.3	1,161.9	157.2	1,153.4	138.8

Table 39

Comparison of National Teacher Examinations Scores of First Year Subjects 1973-1975 by Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
Teaching Area Examination				
Between	2	3,632.0	1,816.0	0.33
Within	103	569,792.0	5.531.9	
Total	105	573,424.0		
Professional Education Test				
Between	2	2,991.0	1,495.5	0.96
Within	105	162,885.0	1,551,3	
Total	107	165,876.0		
Composite				
Between	2	684,192.0	342,096.0	0.44
Within	100	8,440,656.0	784,406.0	
Total	102	9,124,848.0		

American College Test

Tables 40 and 41 show comparative data for the results of the administration of the American College Test for all subjects across the three year period. It should be noted that students complete the ACT prior to admission to the freshman class of the university. No significant differences were noted in the sub-test or the composite scores from administration of the instrument. In general, the subjects were above the mean for all students admitted to the University during the period 1967 through 1971 (the possible date of initial admission to the University for the subjects).

Quality Point Averages

Table 42 shows a comparison of the means and standard deviations for a variety of undergraduate quality point averages in selected subject matter areas for subjects across the three years of the study. Table 43 shows the results of the application of the analysis of variance technique. A significant difference (at the .05 level) was noted in the quality point average achieved by

Table 40

Comparison of American College Test Scores for First Year Subjects 1973-1975 by Year

Area	GRP 1973 (N=32)		GRP 1974 (N=27)		GRF 1975 (N=25)		Composite (N=84)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
English	20.3	7.8	19.0	8.0	20.0	7.1	19.8	7.6
Mathematics	17.3	8.5	15.7	5.7	16.5	5.2	16.5	6.7
Soc. Sci.	16.5	6.8	17.9	8.7	19.1	7.2	17.7	7.6
Nat. Sci.	17.8	5.3	21.6	14.9	21.4	11.4	20.1	11.0
Composite	19.5	11.9	18.7	7.1	20.6	11.2	19.6	10.3

the subjects in their undergraduate Education and Psychology courses. Application of a t-test indicated that the difference was between the subjects in the first and third years of the study. In general across the three year period the mean quality point average for the subjects has increased in all areas.

Table 41

Comparison of American College Test Scores for First Year Subjects 1973-1975 by Use of Analysis of Variance

Source	df	S. Sqs.	M. Sqs.	F-Ratio
English				
Between	2	22.8	11.4	0.19
Within	81	4,791.9	59.2	
Total	83	4,814.7		
Mathematics				
Between	2	34.9	17.5	0.38
Within	81	3,703.9	45.7	
Total	83	3,738.8		

Table 41 (continued)

Social Science				
Between	2	99.9	49.9	0.87
Within	81	4,637.3	57.3	
Total	83	4,737.2		
Natural Science				
Between	2	262.4	131.2	1.09
Within	81	9,758.9	120.5	
Total	83	10,021.3		
Composite				
Between	2	46.6	23.3	0.22
Within	81	8,700.1	107.4	
Total	83	8,746.7		

Table 42

Comparison of Quality Point Averages in Various Areas for First Year Subjects 1973-1975 by Year

Area	GRP 1973(N=52)		GRP 1974(N=32)		GRP 1975(N=32)		Composite (N=116)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Soc. Sci.	2.48	0.58	2.58	0.74	2.57	0.71	2.53	0.66
Science	2.43	0.77	2.55	0.66	2.72	0.74	2.54	0.74
Mathematics	2.55	0.85	2.77	0.75	2.93	0.92	2.72	0.85
English	2.52	0.65	2.73	0.58	2.75	0.65	2.65	0.63
Ed. & Psy.	3.20	0.47	3.31	0.38	3.44	0.29	3.30	0.41
Major Field	3.23	1.31	3.30	0.89	3.28	0.43	3.27	0.93
Overall	2.84	0.44	3.04	0.72	3.10	0.40	2.97	0.53

Table 43

Comparison of Quality Point Averages in Various Areas of Study for First Year Subjects 1973-1975 by Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
Social Sciences				
Between	2	23.0	11.5	0.26
Within	112	4,951.8	44.2	
Total	114	4,974.8		
Science				
Between	2	177.2	88.6	1.63
Within	112	6,075.8	54.2	
Total	114	6,253.0		
Mathematics				
Between	2	266.7	133.3	1.87
Within	99	7,065.8	71.4	
Total	101	7,332.5		
English				
Between	2	124.7	62.4	1.58
Within	106	4,194.4	39.6	
Total	108	4,319.1		
Education and Psychology				
Between	2	118.3	59.1	3.6*
Within	113	1,849.9	16.4	
Total	115	1,968.2		

Table 43 (continued)

Major Field				
Between	2	10.2	5.1	0.06
Within	90	7,890.6	87.7	
Total	92	7,900.8		
Overall				
Between	2	162.7	81.3	2.99
Within	113	3,077.5	27.2	
Total	115	3,240.2		

* Significant at the .05 level.

California F-Scale

A comparison of the results of the administration of the California F-Scale to all first year subjects is shown in Table 44. In general, the subjects in the first year of the study tended to exhibit more authoritarian tendencies than did subjects in the second and third year of the study. Application of the analysis of variance technique (Table 45) indicated no significant differences between the three groups.

Table 44

Comparison of F-Scale Scores for First Year Subjects 1973-1975 by Year

F-Scale	GRP 1973(N=40)		GRP 1974(N=29)		GRP 1975(N=31)		Composite (N=100)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Score	112.6	9.5	101.7	20.0	101.9	24.2	106.1	18.6

Principals Ratings

Table 46 shows the mean and standard deviation of the principals ratings of the first year subjects across the three years of the study. Table 47 shows the results of the application of the analysis of variance technique to the data. There were no significant differences on each of the four factors across the three years of the study.

Table 45

Comparison of F-Scale Scores of First Year Subjects 1973-1975
By Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
Between	2	4,089.0	2,044.5	0.52
Within	97	382,384.0	3,941.5	
Total	99	386,413.0		

Table 46

Comparison of Principals' Ratings for First Year Subjects by Year 1973-1975

Factor	GRP 1973(N=46)		GRP 1974(N=29)		GRP 1975(N=29)		Composite (N=104)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	4.09	0.73	4.03	0.77	4.21	0.69	4.11	0.73
II	4.11	0.85	4.17	0.89	4.48	0.69	4.23	0.83
III	4.18	0.72	4.03	0.68	4.25	0.75	4.16	0.72
IV	4.09	0.70	4.12	0.78	4.14	0.70	4.11	0.73

Table 47

Comparison of Principals' Ratings of First Year Subjects
1973-1975 (3 Years) by Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
Factor-I				
Between	2	0.49	0.25	0.46
Within	100	53.33	0.53	
Total	102	53.83		

Table 47 (continued)

Factor-II				
Between	2	2.63	1.31	1.95
Within	101	67.84	0.67	
Total	103	70.47		
Factor-III				
Between	2	0.70	0.35	0.68
Within	98	50.76	0.52	
Total	100	51.46		
Factor-IV				
Between	2	0.01	0.01	0.02
Within	101	49.28	0.49	
Total	103	49.29		

Student Evaluation of Teaching

Table 48 shows the means and standard deviations for the first year subjects across the three years for each of the factors of the SET-I and the total score (VI). Table 49 shows the results of the application of the analysis of variance technique to the data. A significant difference (at the .05 level) was noted in Factor II (Knowledgeable and Poised) across the three years. Application of the t-test indicated that there were significant differences between the first and second and third year subjects. In general, those individuals who entered the study in the second year were rated lower by their students than those individuals who entered the study in 1973 or 1975. The data for the 1973 and 1975 groups are comparable to the results obtained by Sandefur and Adams (2). No explanation can be offered at this time for the seemingly lower scores achieved by the 1974 group.

Table 48

Comparison of SET-I Scores For First Year Subjects Across Three Years 1973-1975

Factor	GRP 1973(N=25)		GRP 1974(N=10)		GRP 1975(N=19)		Composite (N=54)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	344.5	45.8	307.9	56.8	347.6	32.8	338.8	45.7
II	346.6	38.3	309.6	70.4	347.3	24.3	340.0	43.8

Table 48 (continued)

III	307.1	63.6	299.1	57.1	303.5	38.7	304.4	63.9
IV	306.6	38.2	312.6	37.5	304.8	38.5	307.1	37.5
V	255.9	44.9	236.0	55.6	247.5	48.6	249.3	47.9
VI-Total	315.6	29.4	292.8	34.2	310.1	25.7	309.4	29.7

Table 49

Comparison of SET-I Scores For First Year Subjects
1973-1975 by Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
Factor-I				
Between	2	11,819.0	5,909.5	3.05
Within	51	98,681.0	1,934.9	
Total	53	110,500.0		
Factor-II				
Between	2	11,362.0	5,681.0	3.20*
Within	51	90,449.0	1,773.5	
Total	53	101,811.0		
Factor-III				
Between	2	477.0	238.5	0.08
Within	51	153,520.0	3,010.2	
Total	53	153,997.0		
Factor-IV				
Between	2	408.0	204.0	0.14
Within	51	74,308.0	1,457.0	
Total	53	74,716.0		

Table 49 (continued)

Factor-V				
Between	2	2,924.0	1,462.0	0.63
Within	51	118,841.0	2,330.2	
Total	53	121,765.0		
Factor-VI-Total				
Between	2	3,712.0	1,856.0	2.19
Within	51	43,098.0	845.1	
Total	53	46,810.0		

* Significant at the .05 level.

Table 50

Comparison of Ratios From Interaction Analysis For First Year Subjects 1973-1975

Ratio	GRP 1973(N=39)		GRP 1974(N=31)		GRP 1975(N=28)		Composite (N=98)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
i/d	2.10	60	1.32	1.96	3.18	3.25	2.17	3.12
I/D	0.98	1.57	0.65	0.46	0.75	0.45	0.82	1.05
ST/TT	0.64	0.61	0.78	1.17	0.52	0.19	0.65	0.77
Sil/Tot	0.47	0.99	0.50	0.76	0.39	0.36	0.46	0.78
Lec/Tot	0.51	0.21	0.40	0.18	0.51	0.14	0.47	0.18

Interaction Analysis

Table 50 shows the means and standard deviations for the five ratios derived from the use of interaction analysis with the first year subjects. Table 51 shows the results of the application of the analysis of variance technique to the data. A significant difference (at the .05 level) was noted in the Lecture/Total ratio. Application of the t-test indicated that there were significant differences between first and second and third year subjects. The Lec/Tot ratio was significantly lower for the 1974 group than either the

1973 or 1975 groups. No explanation can be offered for the apparent lower Lec/Tot ratio for the 1974 group.

Table 51

Comparison of Ratios From Interaction Analysis for First Year Subjects 1973-1975 by Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
i/d Ratio				
Between	2	51.2	25.6	2.72
Within	95	894.2	9.4	
Total	97	140.6		
I/D Ratio				
Between	2	2.1	1.1	0.95
Within	95	106.4	1.1	
Total	97	108.5		
ST/TT Ratio				
Between	2	1.0	0.5	0.83
Within	95	57.0	0.6	
Total	97	58.0		
Sil/Tot Ratio				
Between	2	0.2	0.1	0.17
Within	95	58.7	0.6	
Total	97	58.9		
Lec/Tot Ratio				
Between	2	0.23	0.11	3.40*
Within	95	3.16	0.03	
Total	97	3.39		

* Significant at the .05 level.

Classroom Observation Record

Table 52 shows a comparison of the means and standard deviations from the 22 items of the Classroom Observation Record for first year subjects across the three years of the study. Table 53 shows the results of the application of the analysis of variance technique to the data. Nienteen variables were found to be significantly different (at the .05 level or beyond). Application of the t-test indicated that there were significant differences between all possible contrast for variables 4 and 21 (Depending-Initiating "student variable" and Immature-Integrated "teacher variable"). In general subjects in the third year of the study were rated significantly higher on both variables than subjects in their first year of the study in 1973 and 1974.

Application of the t-test in all other cases indicated that there were significant differences between the 1973 and 1974 and 1974 and 1975 data. In this later case, there were no significant differences between 1973 and 1975 data. It is believed that due to the somewhat subjective nature of the instrument, that the generally low scores obtained during the 1974 phase of the study were due to a function of the training that the graduate assistants received. Although every effort was made to achieve reliability in the data gathering process, difficulties arose across the three years of the study. It is hypothesized that there were no significant differences in the subjects in each of the three years. This hypothesis will be tested in the extension of the study into the fourth year in 1976-77.

Table 52

Comparison of COR Scores For First Year Subjects 1973-1975 by Year

Factor	GRP 1973(N=42)		GRP 1974(N=31)		GRP 1975(N=31)		Composite (N=104)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1	6.0	0.9	5.1	1.0	6.1	0.9	5.7	1.0
2	5.8	0.9	4.9	1.0	5.7	0.9	5.5	1.0
3	5.6	1.0	4.9	1.2	5.9	0.8	5.5	1.1
4	5.2	1.2	4.5	1.2	5.8	0.9	5.2	1.2
5	6.1	0.8	5.4	0.9	6.4	0.6	6.0	0.9
6	5.7	1.0	5.1	0.9	6.2	0.9	5.7	1.0
7	6.1	0.9	5.4	1.1	6.3	0.7	5.9	1.0
8	6.2	0.8	5.5	0.9	6.4	0.7	6.0	0.9
9	6.2	0.7	5.5	1.0	6.3	0.9	6.0	0.9
10	5.7	1.0	5.4	1.1	5.7	0.8	5.6	1.0
11	5.4	1.1	4.9	1.3	5.6	0.8	5.4	1.1

Table 52 (continued)

12	6.1	0.8	5.4	1.0	6.4	0.7	6.0	0.9
13	6.3	0.7	5.5	0.9	6.4	0.7	6.1	0.9
14	6.3	0.8	5.9	0.8	6.5	0.7	6.2	0.8
15	5.9	1.0	5.2	1.2	6.3	0.8	5.8	1.1
16	6.1	1.0	5.4	1.0	6.3	0.8	6.0	1.0
17	5.8	1.1	5.0	1.2	6.3	0.8	5.8	1.2
18	6.1	1.0	5.7	0.8	6.1	1.0	6.0	1.0
19	5.8	1.1	5.0	1.1	5.8	0.8	5.6	1.1
20	5.8	1.1	5.1	0.9	6.4	0.7	5.8	1.0
21	6.0	0.9	5.3	1.0	6.5	0.7	5.9	1.0
22	5.8	0.8	4.9	0.8	5.8	0.8	5.6	0.9

Table 53

Comparison of COR Ratings of First Year Subjects 1973-1975
By Use of Analysis of Variance

Source	df	S. Sqs.	M. Sq.	F-Ratio
Factor-1				
Between	2	19.7	9.9	11.8**
Within	101	94.7	0.8	
Total	103	104.5		
Factor-2				
Between	2	17.3	8.6	10.22**
Within	100	84.5	0.8	
Total	102	101.8		

Table 53 (continued)

Factor-3				
Between	2	15.9	7.9	7.51**
Within	100	105.9	1.1	
Total	102	121.8		
Factor-4				
Between	2	25.8	12.9	10.0**
Within	101	129.7	1.3	
Total	103	155.5		
Factor-5				
Between	2	17.1	8.5	14.3**
Within	100	59.9	0.6	
Total	102	77.0		
Factor-6				
Between	2	18.7	9.4	10.22**
Within	100	91.7	0.9	
Total	102	110.4		
Factor-7				
Between	2	16.2	8.1	9.12**
Within	101	89.5	0.9	
Total	103	105.7		
Factor-8				
Between	2	14.7	7.3	10.7**
Within	100	68.3	0.7	
Total	102	83.0		

Table 53 (continued)

Factor-9				
Between	2	13.4	6.7	9.4**
Within	100	71.5	0.7	
Total	102	84.9		
Factor-10				
Between	2	2.1	1.0	1.02
Within	95	96.9	1.0	
Total	97	99.0		
Factor-11				
Between	2	6.6	3.3	2.88
Within	93	107.3	1.2	
Total	95	113.9		
Factor-12				
Between	2	17.6	8.8	12.9**
Within	100	68.4	0.7	
Total	102	86.0		
Factor-13				
Between	2	15.0	7.5	12.2**
Within	100	61.2	0.6	
Total	102	76.2		
Factor-14				
Between	2	5.6	2.8	4.48*
Within	100	62.8	0.6	
Total	102	68.4		

Table 53 (continued)

Factor-15				
Between	2	19.5	9.8	9.57**
Within	100	102.0	1.0	
Total	102	121.5		
Factor-16				
Between	2	11.8	5.9	6.64**
Within	98	87.1	0.9	
Total	100	98.9		
Factor-17				
Between	2	25.3	12.7	11.4**
Within	97	107.4	1.1	
Total	99	132.8		
Factor-18				
Between	2	3.5	1.8	1.77
Within	96	95.5	0.9	
Total	98	99.0		
Factor-19				
Between	2	11.2	5.6	4.93**
Within	95	108.2	1.1	
Total	97	119.4		
Factor-20				
Between	2	22.4	11.2	12.68**
Within	94	82.9	0.9	
Total	96	105.3		

Table 53 (continued)

Factor-21				
Between	2	21.9	11.0	14.06**
Within	97	75.7	0.8	
Total	99	97.6		
Factor-22				
Between	2	14.8	7.4	11.14**
Within	90	59.8	0.7	
Total	92	74.6		

* Significant at the .05 level.
**Significant at the .01 level.

Summary

In summary, this chapter has presented a brief study of comparisons of data collected over a three year period as a part of the application of the Tennessee Technological University Teacher Evaluation Model. Results of the study indicated some differences in the correlational patterns of the variables under study. Comparison of data collected on the same groups of subjects across three years indicated few differences. Data collected on three groups of first year subjects across the three years of the study (1973 through 1975) also revealed few differences. It might be concluded that the subjects change little over the first three years of teaching and that the graduates entering the teaching field have changed little over the past three years. Further study is recommended to more fully verify these conclusions. It is anticipated that the factor analysis and discriminate analysis techniques will be employed in the near future to further clarify the preliminary results of the study.

References

1. Sandefur, J.T. and Ronald D. Adams. "An Evaluation of Teaching: An Interim Research Report," Journal of Teacher Education, 27(1):71-74, 1976

2. Ibid.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The objectives of this chapter are three fold: (1) summarize briefly the total evaluative study that was conducted during the 1975-76 school years; (2) draw conclusions based on the findings of the study; and (3) make recommendations relative to the findings.

Summary

The purposes of this study were to: (1) provide information for faculty and administrators concerned with teacher education programs at Tennessee Technological University in making decisions pertinent to curriculum evaluation and development; (2) aid in the process of making long range plans for improving the total educational program of the University with particular emphasis on the teacher education programs; and (3) continue the development and refinements of the Tennessee Technological Teacher Evaluation Model.

Three distinct groups of subjects were used in the study. The first group consisted of 26 individuals who participated in the first two years of the study and received their degrees between 1971 and 1973. The second group consisted of 18 individuals who received the B.S. and 8 who received the M.A. in 1974 and were participating in the study for the second year. The third group was composed of 32 individuals who receive the B.S. and 12 who received the M.A. in 1975 and were participating in the study for the first year. Detailed data were collected on each subject by use of standardized instruments administered by specially trained graduate assistants or from university records. Basic instrumentation and procedures for the study were pilot tested during the first year of the study and included: (1) University permanent records and transcript information; (2) principals' evaluation of each subject by the use of two different instruments; (3) administration of the California F-Scale (only those subjects who were participating in the study for the first time) to measure individual prejudices and anti-democratic tendencies; (4) administration of the Student Evaluation of Teaching to the students of the subjects; (5) administration of the Classroom Observation Record; and (6) a ten category interaction analysis system to record observed classroom behavior. All data obtained in the study were classified, coded, and key punched for analysis. Descriptive statistics, intercorrelations and comparisons were computed. The major findings of the study were divided into three parts, e.g., first year B.S. subjects, first year M.A. subjects and comparisons across the three years. Data were collected about second year subjects and stored for later use in data analyses.

The major findings of the study for the B.S. and M.A. level subjects were similar to those reported in the first two years of the study. Therefore, no detailed explanation of the findings will be given at this point (see Chapters II and III of this report). Detailed comparisons across the three years of the study, for those individuals that entered the project in 1973 indicated few

significant differences. The differences that were noted were minor and in most cases no explanation can be offered for the changes. It appeared that the subjects had changed little during the three years that they were under study.

A detailed comparison was made on the data obtained on all first year subjects across the three years of the study. Again, it was noted that there were few differences in the individuals. Some variation was noted in the data gathered during the first and second and second and third years of the study. However, comparisons across the first and third year data were not significant. No detailed explanations can be offered at this time for the apparent differences. Basically, the differences were very minor and there appeared to be no differences between the three groups of subjects.

Based on the findings of the study, several conclusions were advanced and recommendations made for continuation of the study. These follow in the next two sections.

Conclusions

Following are the major conclusions based on the findings of the study. It should be noted that additional analyses of the data are planned that may make additional conclusions warranted. This section is divided into the following parts: Use of the Evaluation Model, Evaluation of Graduates During 1975-76 and Comparisons of Data Across Three Years.

Use of the Evaluation Model

1. The plan of evaluation outlined in this report and the companion documents, Reports 74-4 and 75-4, appeared to be useful in gathering information for modifying and improving the programs of teacher education at Tennessee Technological University.

2. Instrumentation employed in the study appeared to be valid and provided essential information with regard to the graduates of the teacher education programs.

3. Modifications can be made in the original model that can lead to more valid and useful information for an institution wishing to replicate the plan of evaluation.

4. Some problems have resulted in the collection and analyses of data because of the attrition of subjects from the first two years of the study. Additional attrition in the future may make it difficult to draw valid and reliable conclusions.

5. Better and more refined methods are needed for training of the graduate assistants in the use of the Classroom Observation Record. It was felt that some of the significant differences that were noted in the study may have been due to unreliable observations.

Evaluation of Graduate During 1975-76

6. The evaluation data collected during the period of the study has changed little. In general, the subjects that entered the study during the current year were comparable to those that entered in the past two years. The differences and similarities noted in the earlier reports (74-4 and 75-4) apply in the data collected during 1975-76.

Comparisons of Data Across Three Years

7. Subjects who entered in 1973 (the first year of the study) have changed little across the three year period.

8. Subjects who entered the project in 1973, 1974, and 1975 appeared to be very similar in their first year of teaching.

9. Based on the results of the very limited comparisons that were made, the subjects reached a level of teaching proficiency during their first year in the classroom and this level has remained nearly constant across three years.

10. During the three year period of the study, the graduates of the University have not changed significantly.

In summary the results of the study lead to the same conclusions as in the past. Across the three years of the study, the subjects have remained almost unchanged and comparisons of the three first year groups indicated few or no differences. It might be further concluded, that if there are differences in the groups, the present instrumentation is not sensitive to the differences.

Recommendations

Based on the conclusions of this study, it is felt that the following recommendations are warranted. These recommendations center largely around the continuation and modification of the study outlined in this report. It is left to the reader to make recommendations relative to his individual problems and toward needed changes in the teacher education programs of the institution.

1. The plan outlined in this report should be replicated during 1976-77 adding an additional group of subjects who complete their degree requirements in 1976.

2. Continuing contact should be maintained with other institutions pursuing similar projects, and the literature related to teacher evaluation should be continuously monitored.

3. Consideration should be given to the use of other instruments to gather data as they become available.

4. Further analyses of the data should be made employing more sophisticated statistical techniques such as factor analysis and discriminate analysis.

5. Faculty of the institution and other individuals should be encouraged to review the report and to request additional data analyses to fit their individual needs.

6. A more extensive data bank of information on all students in the teacher education programs should be established. Thereafter, a more meaningful study can be made in relation to predicting success of graduates in teaching.

7. Better methods should be developed to optimize the participation of subjects in the study.

8. Development and refinement of a complete set of computer programs, for use with the project should be continued. There is a need for more complete documentation of the programs available.

9. Faculty and administrators should be encouraged to make more use of the data that has been collected and to request additional information.

10. Work should continue on the development of other phases of the total evaluation project, i.e., instrumentation for use with Ed.S. level graduates and for those individuals in such fields as administration, supervision, and counseling.

CHAPTER VI

PLANS FOR THE CONTINUATION OF THE STUDY

This chapter describes the tentative plans for continuation of the intensive evaluation activities of the graduates of the teacher education programs of Tennessee Technological University. Major emphasis in this chapter will be placed upon the plans that have been tentatively formulated for the 1976-77 studies. The assumption has been made that the level of funding for the project will remain at an adequate level and includes the allocation of three one-half time graduate assistants; approximately one-half time of a professional staff member; $750 for travel; and $750 for supplies, expenses and communications.

Plans for 1976-77

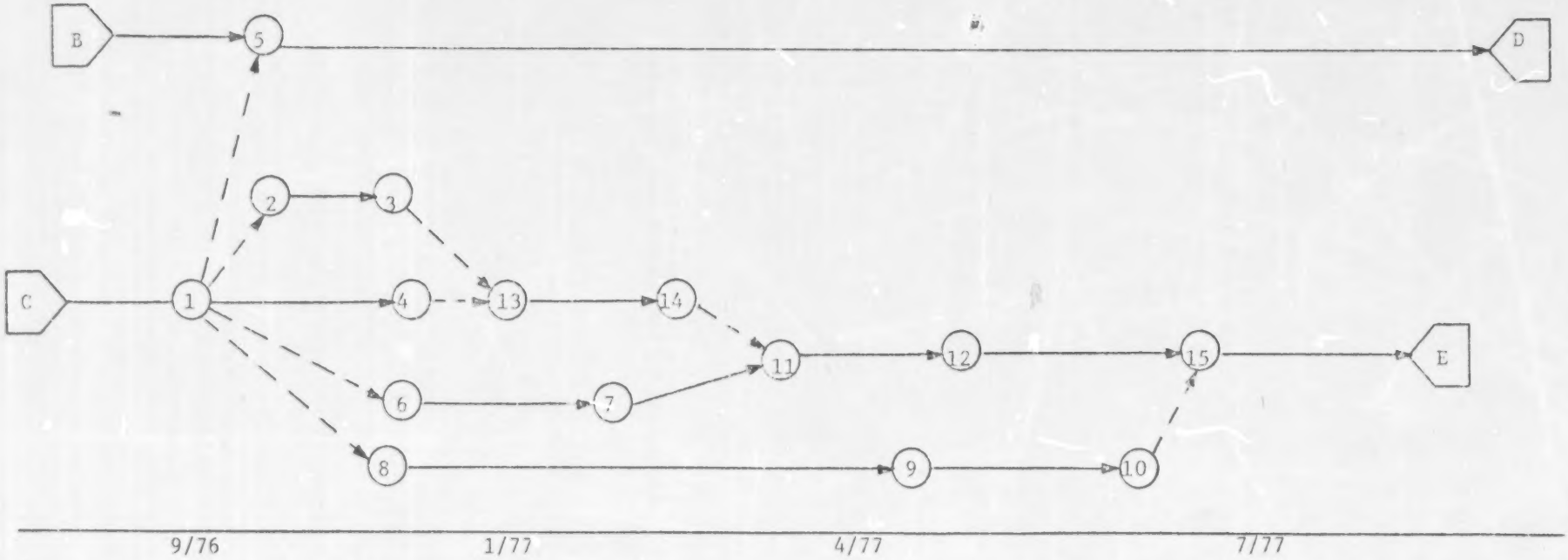
During 1976-77 particular emphasis will be placed on evaluation studies of the 1973 through 1976 graduates of the teacher education programs. Subjects who graduated prior to 1973 will be dropped from further study because of the limitation of funds. The potential population of 1973 through 1975 graduates is 78. In addition, a sample of approximately fifty 1976 graduates will be added to the study.

Figure 4 shows an abbreviated chart for the major activities of the project during 1976-77. Initially, three graduate students will engage in intensive studies of the use of the Classroom Observation Record, the Student Evaluation of Teaching, and Interaction Analysis. This will occur from approximately September 1 through October 15. Concurrent with these activities, a schedule of visitations will be developed for the 1973-75 graduates that have previously participated in the study. These 78 individuals will be visited starting the later part of October, 1976. Visitation will continue until sometime in January, 1977.

As soon as possible after the beginning of the fall quarter a survey questionnaire will be sent to all 1976 graduates of the teacher education program. At this same time the 1976 graduates will be asked to participate in the study. It is anticipated that a sample of 35 B.S. level graduates and 15 M.A. level graduates will be selected. During the early part of the winter of 1977, a schedule of visitation for these individuals will be prepared. During the winter of 1977 and early spring, these individuals will be visited for purposes of observation and gathering baseline data. Also, during the winter, the Principals' Evaluation Instrument will be sent to the principals of all individuals who are teaching in the schools.

Beginning in the late spring and continuing through the summer of 1977, data analysis will be made and a report of the third year activities of the study will be prepared. It is anticipated that this report will contain comparisons of the four years of the study.

During 1976-77 at least one or more special studies will be carried out that will lend extra data to the total project. Also, it is anticipated that



Summary of Activities

1-4	Finalize Plans for Visiting Subjects in 1973-75 Phases of Study
2-3	Training of Observers
5--	Continuing Contact With Other Projects and Survey of the Literature
6-7	Survey All 1976 Graduates
8-9	Conduct Other Related Studies
9-10	Prepare Reports of Related Studies
7-11	Select Sample of 1976 Graduates for Intensive Study as Part of Followup
11-12	Make School Visits on 1976 Graduates
13-14	Make School Visits on 1973-75 Graduates
12-15	Complete Reports and Submit
15---	Begin Making Plans for 1977-78 Phase of Study

Figure 4. PERT Chart of Major Activities for 1976-77.

further analyses of the accumulated data will be made as time and assistance are available. Plans for the speical studies and data analyses will be made during the later part of the summer of 1976.

Long Range Plans

Tentative long range plans have been made for the total project. The assumption has been made that the level of funding for personnel will remain approximately the same. It is anticipated that in 1976-77 a group of 1976 graduates of the teacher education program will be added to the study and those individuals who graduated prior to 1973 will be dropped. The basic plan outlined for 1976-77 will be continued during 1977-78. Also a group of Ed.S. graduates will be added to the study.

During 1976-77 an intensive evaluation will be made of all data that has been collected and major modifications may be made in the research design. It is further anticipated that additional instrumentation will become available which will make the project more meaningful.

APPENDIX

REPORTS AND STUDIES RELATED TO THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

1. Ayers, Jerry B. Report I-Restudy. A Survey of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 Through 1969, Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 49 pp.

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4. Ayers, Jerry B. "Predicting Quality Point Averages in Master's Degree Programs in Education", Educational and Psychological Measurement, 31:491-95, 1971.

5. Ayers, Jerry B. A Survey of Student Teachers at Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 7 pp.

6. Ayers, Jerry B. Report V-Restudy. A Report of Two Surveys of the 1971 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1972. (mimeo.), 28 pp.

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9. Ayers, Jerry B. and Michael E. Rohr. "The Relationship of Student Grade Expectations, Selected Characteristics, and Academic Performance for Education, Engineering, and Business Majors," Presented before the American Educational Research Association, April, 1972, Chicago, IL.

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16. Ayers, Jerry B. and Robert E. DuBey. "Student Teachers Attitudes Towards Supervising Teachers," The Educational Catalyst, 4:17-22, 1974.

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18. Ayers, Jerry B. Report 74-3. Study of the Graduates of the Library Science Program of Tennessee Technological University 1969-1973. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 28 pp.

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20. Ayers, Jerry B. Report 74-4. Tennessee Technological University Teacher Evaluation Model. Cookeville, TN: Tennessee Technological University, College of Education, 1974, (mimeo.), 92 pp.

21. Duncan, Barbara Louise. Report 74-5. Study of the Graduates of the Counselor Education Program of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 33 pp.

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